

SOUTHERN TEXTILE BULLETIN

VOL. I

CHARLOTTE, N. C., JUNE 1, 1911

NUMBER 14

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of
Old Mills
a Specialty

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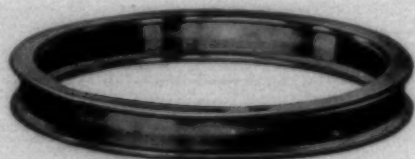
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SOUTHERN AGENT

J. D. CLOUDMAN - 40 S. Forsyth St., ATLANTA, GA.

Southern Circulation

There are 889 cotton mills in the South and the journal which reaches the office only could therefore have only 889 subscribers among Southern cotton mills if it secured a subscription from every one of them.

A Northern journal which secured subscriptions from half of them would be doing remarkably well and 500 subscribers among Southern cotton mills is about all that any of them have obtained.

A Southern textile journal that carries live personal news and practical articles each week has a much larger field as it goes not only to the office but to the superintendents, overseers, second hands, dyers and master mechanics.

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Southern Textile Bulletin

CHARLOTTE, N. C.

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SOUTHERN TEXTILE BULLETIN

VOL. I

CHARLOTTE, N. C., June 1, 1911

NUMBER 14

Cotton Goods in Bolivia

REPORT OF FORMER COMMERCIAL AGENT
W. A. GRAHAM CLARK

Continued from May 11

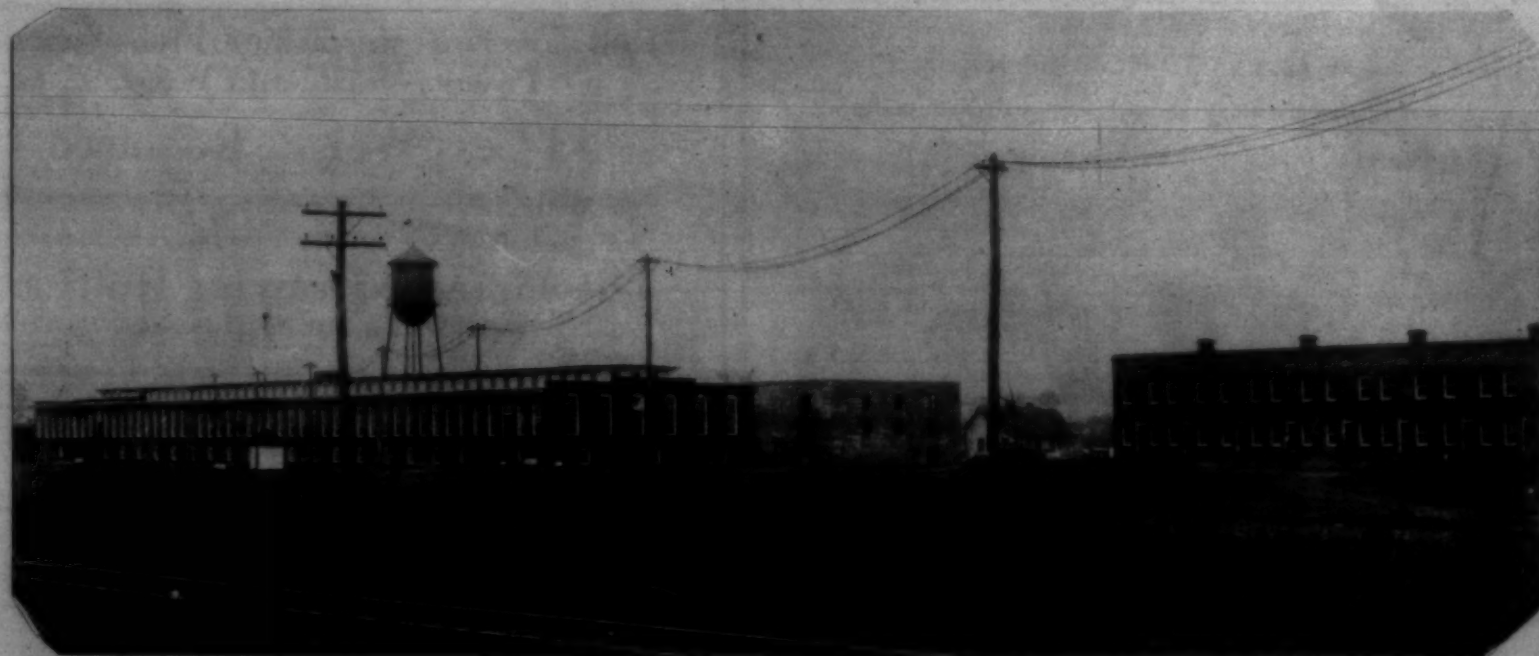
The cholo woman wears a short, pleated skirt opening down the front and sticking out on both sides. The underskirts, often of fine lace, hang down a little below the skirt. Each woman needs about 4 feet of space in order not to crush her finery. Many of the women employ their time making this lace, but the short, pleated skirts are made by men. The cholo women wear high shoes, with high heels. These shoes are often made with two rows of buttons and sometimes in various ways, and those who can afford it buy hand-made shoes. The headgear is either a short-brimmed, round, high-crowned glazed Panama or the

long as they are not bothered by the Government they care little about it. When the Spaniards first came to Bolivia they found little trouble in taking possession of the country and enslaving the inhabitants, but in the 400 years following the whites have been unable to force the Indians to accept either their speech or their customs, and the Indian of today is about the same as he was when the Spaniards arrived.

According to Bolivian statistics the white and cholo population is increasing and the native Indian population decreasing. The number

mentation the women chew the maize and place it in a pot, in which it is allowed to boil for two days; it is afterwards kept in jars for some time, and is then ready for use. Some chicha is made by machinery, but is not so popular as the masticated. It is mildly intoxicating, but as it is consumed with large quantities of alcohol, a large glass of chicha being followed with a small cup of alcohol, the Indian soon becomes intoxicated. Slavery has been abolished in Bolivia for a national drink of Bolivia, called long while, but children are still

some rectangular, some round, and some with the four sides built so as to slope in toward top. They do not live in villages with regular streets, the houses of a settlement being scattered promiscuously over the plain. Both men and women wear crude sandals or go barefoot. The men wear hand-woven trousers made of wool, usually coarse black and white checks, or else of sackcloth. Their coats are of the same material or of cheap German cottonade, and they always wear a poncho, usually of wool, striped in gay colors. Their hats are usually of felt, but some wear gaudy, knitted caps, with long tasseled ends and hanging ear flaps.



DRESDEN COTTON MILLS, LUMBERTON, N. C.

round felt hat that is worn by the men. The cholo women always wear shawls, usually of white, with broken stripes of pink or other colors. The cholos, being much more numerous than the whites and having a right to vote, exercise some power, and a law can not be passed to which they are opposed.

The Native Indians.

The Indians are the most numerous of all, but have little or no political power and seem to have little aspiration in this direction. So

of Indians has been gradually declining since 1878, when they were decimated by the plague and subsequent famines of that period. Another fact that has tended to bring about their disappearance is the one habit that they adopted from their white conquerors—the consumption of alcoholic liquors. The Indians, as a rule, live mainly on maize and beans, and except around the towns rarely have any bread. They have over a score of ways of cooking maize, and also make from it the "chicha." In order to set up fer-

bound out as house servants for about \$10 apiece and are held until they become 21 years of age, receiving only their food and clothing.

Indian Customs and Dress.

The Indian, though he forms the bulk of the population, does little to increase the demand for foreign goods. He makes most of his own garments, spinning and weaving llama and vicuna wool by hand, raises the maize, beans, and few other foodstuffs he needs, and is content if let alone. Their houses are of mud or sun-dried brick,

The skirts, numerous underskirts, and bodices of the Indian women are of hand-woven woolen "bayeta," or of similar biazze imported from England or Germany. This material is always piece-dyed in gay colors. The women wear mantas or blankets around their shoulders, and another manta or a shawl is thrown around their shoulders and tied under the chin, and in the folds of

Continued on page 9

Opening, Mixing and Picking

Number Seventeen.

OPENING, Mixing and Picking," are three very important things to be considered in making good yarn or cloth or both, for you cannot make good cloth from poor yarn and you cannot make good yarn from poorly opened and mixed cotton.

You can give it a most thorough beating and dusting in the picker room, but if the stock has not been carefully selected, opened and mixed before going into the picker room, it will certainly show up on the work especially in the spinning and weaving departments.

The cotton or stock should be carefully selected as to color, length of staple and cleanliness, according to the goods that are to be made. Of course every one knows that the finer the goods the better must be the stock and the more care required in the mixing.

Any ordinary carding room overseer knows that he can make roving for No. 10s yarns from stock that is good enough to make No. 40s, but an ordinary carding room overseer will have some trouble in making No. 40s yarns from stock that is only good enough for No. 10s. So where the stock in warehouse is a little under grade it will require very careful attention to the selection and mixing to keep the goods up to standard, both as to color and strength.

For the work to run well through the different departments and to get the largest possible production from the spinning frames and looms, strength plays a very important part, so in opening and mixing look well to strength.

Well let's go back a bit and consider the things most managers expect of their superintendents and overseers, that is to get the quality and quantity in production and both of these are very often lost sight of in the opening and mixing departments because a great many men think that a bale of cotton weighs five hundred pounds or thereabouts, and there is so many of these bales in the warehouse and that these bales have to be made into yarn or cloth and one time is as good as another and one bale is as good as its neighbor.

But it is not so, as to being as good as its neighbor and to get the highest possible production, both in quality and quantity, cotton should be very carefully selected and thoroughly mixed.

The quantity to be opened at a time depends largely on the amount

consumed, but enough bales should be opened to allow it time to air and puff up before stock is put into bale breaker or mixed by hand on a pile.

Now I give this system for opening and mixing:

First have an opening room adjoining the warehouse, with bale breaker or breakers enough to care for the stock without crowding and have these breakers to discharge the stock into a mixing room. Have the stock taken from this room to automatic hopper feeder attached to a suction flume with condenser located in picker room back of breaker pickers. Stock dumped from condenser on to a wire screen and bin wired on three sides, back and ends, and open on side next to breakers and raised 10 inches from floor on open side and 24 inches on back side so it will be easily cleaned underneath. Now you will be astonished at the amount of sand and dirt that will fall through this screen that would otherwise go into the pickers and besides the stock is getting a thorough airing all the time and is in fine condition for the pickers to clean.

As to making good even laps will say there are so many little things about picking machines that will cause them to make anything but good even smooth laps that will run off or unwind on the cards, that it is rather hard for me to know where to begin.

But one of the most important things is speed. Beaters' and fans either too fast or too slow and nearly always too fast. The beater blades should strike the stock enough times to knock out the motes or the coarse motes at least, and the fans should revolve fast enough to take care of the draft that the beater makes, no more and no less. If this is done and careful attention is given to the machines in general you will not be bothered with split laps. My card hands do not know anything about split laps, we are never bothered with them and we have no patent preventers and fancy double adjustable back action grids, just the plain Kitson regulation picker is good enough for anybody.

We find that a speed of 1,070 revolutions per minute for three blade beaters, breaker picker single beater machine and a fan speed of 880 revolutions per minute gives us the best results.

On intermediate single beater machine two blade beater, 1,340 revolutions and fan 840 revolutions and

on finisher we have three bar Kirschner beaters that make 1,140 with fan speed of 900 revolutions, and we have no split laps, never. These speeds may not suit everybody but I got them by careful experimenting.

Another important thing in making laps is to have the grids properly set. My idea is that they should be open enough to let the motes out and not enough to waste good cotton, for we realize that cotton is expensive. As to closeness to beater they should be within one-half inch of beater blades and the bars. I do not like a very sharp edge, rather have them just a little round.

The pickers should be kept clean and it is not so important to keep them clean on the outside as it is on the inside, for they do their dirty work so much better if they are kept clean and well oiled. Pickers require quite a lot of attention to get good results, and it is the man who keeps on keeping on looking after the little details, that makes his machines do good even work.

Scotch Irish.

Number Eighteen.

ON entering this contest, we must all realize that it is of very broad scope and varied in its many divisions and we might add, at the outset, to the three heads of "Opening, Mixing and Picking," the fourth division, "Storing or Warehousing."

Now, I wish to say a few words with regard to the latter. Many of our warehouses are arranged without floors, the cotton being laid or stood on the dirt, thereby causing not only waste from this dirt but having the dampness absorbed throughout the bales, and not only those on the bottom (should it be piled more than one high) but every bale in the warehouse holds this dampness or moisture, thereby making it work much more difficult from the opener to the finished product, whereas, at small cost, all this can be eliminated by having a good floor of rough 2 by 6 or 3 by 6 plank, laid 1-2 inch apart. These few words, I hope will be helpful to some one and make them look more carefully to their place of storage. A great many mills have a very small mixing room, the average size I feel sure, would accommodate about 20 bales, now with suitable warehouse facilities, this would do alright. Of course we all

know the larger the mixing, the better the cotton works, but give me 20 bales of dry, well cared for cotton rather than 50 bales of dust-coated, moist, sticky cotton.

Nobody but the man with experience can realize the tremendous importance of a good, big, "mixing." It is naturally the starting point of the yarn and all the care used thereafter will be utterly wasted if this point is allowed to become carelessly handled. There are many points right along here that could be mentioned, all small ones but each of the gravest importance, but I will go on. Now taking it for granted that our cotton has had proper warehousing and comes to our picker room in good shape, I will take 20 bales, laying down 10 at a time and take some off each bale, this gives you a good chance to work in any "off" bales which you may find not to be up to the standard and a good way to find this out in opening the bales, is to split them half in two, making the 10 bales opened show up as 20 piles, and begin from the center of each.

But, on the other hand, where cotton sits on the dirt floor of warehouses we rather need two mixing rooms, mixing from 30 to 40 bales in each room and use from one while the other is drying out, being careful at all times to mix in the return stock, (commonly called "waste") and I have found the best way to do this is, to make a breaker lap of this stock, putting one of these laps on your intermediate apron, with 3 good laps, setting this product aside, then put one of these intermediate "waste" laps to 3 good ones on your finisher apron and this will make a systematic, judicious mixing that will never be felt in the after workings, such as the spinning where this mixing of return stock is most severely felt.

In my opinion, there is a great deal of neglect in securing competent help for the average picker room, many superintendents and overseers seem to feel that they can put just any old worn out "mule" in their picker room and get good results. This is a grievous error and to my mind it is the cause of more bad work than any other place in our average mills. A well trained picker room "gang" who know how to keep their machines in good condition and will do it, are hard to find and when once found are a mighty good bunch to hang on to as we can have the very best mixing ware-

W. H. BIGELOW

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housing and everything else, and then by a careless operator in the picker room all is lost.

Now let's start with the breaker, we will suppose the apron and beaters and all working parts are in good shape, then let us be careful that the beaters, cap screens, covers and mote boxes, be cleaned twice a day, the lapper tender should be taught and impressed with the necessity of keeping his machines clean and well oiled, by "clean" I don't mean only on the outside, only, (which is too common a fault) but on the inside as well. The fan should have just enough speed to take the cotton from the beater, in a uniform manner and not to take it in such force that it will cause uneven laps, while on the other hand, if the fan has not sufficient speed it will cause the cotton to hang to the beater and be delivered in bunches.

As to the standard speed of fans and beaters, I do not know of any, what may suit one mill may not suit another, so the machine builders know more about it than anyone else, I suppose, so we will have to leave it to them.

Every machine has a damper to regulate air currents so as to not have all the currents on one cage.

We will now go to the intermediate; the man in charge of this machine should be taught and impressed with the necessity of making short pieces and never to let a lap on the apron to run entirely out but to watch his work closely and keep the four laps running all the time and never to have all four of them the same size but have them as nearly as possible 2 full laps and 2 half laps. When the four laps are running, the cone belt should run about the center of the cones.

Now to the finisher machine, there should be the same care used on the apron mechanism and impress the importance of doffing and weighing each lap accurately and any lap that varies too greatly to throw it back and run it through again, and never let a lap go that varies more than 1-2 pound either way. If the above system is carried out, strictly, the finished lap should be a perfect product and procure good work throughout the mill.

I trust these few words may be of service to some one.

Picker Room.

Nineteen.

I will endeavor to give my ideas as best as I know how, on "Opening, Mixing and Picking."

I will say, at the beginning, that some mills have better arrangements than others for opening and grading their cotton. For the breaker rooms, some mills have good, large rooms in which to open their cotton, and let it come to its right form, while others have to open their cotton, and put it into the breaker from the bale. I think, in this case, it is best to open up as many bales as convenient, that is if you do not have the same grade of cotton. In this case, it is best to take a little of each bale, and throw it into the hopper of the breaker, and you will have your cotton very well mixed.

Next there is the waste to take care of. There are some mills that can take care of their waste better than others, as some have waste pickers with which to tear up their speeder and spinning waste, and can

mix this up with their cotton, and it will not be in a twisted condition when it reaches the finisher beater and cards. In some mills, I have noticed this being the case where there is no waste picker.

It is well to have a man with experience in handling waste, and who will take hold of the waste and mix a little through his cotton so it will not have his machine choked down from too much waste.

The next question is, how are you going to feed your breakers? I think that, in order to have a good breaker lap, you should keep your hoppers about two-thirds full all the time so that there will be the same amount of cotton going through all the time.

The next thing is to keep your draft right. Keep your dust and drain pipes clean, and your screens clean and in good turning condition. Keep the oil holes clean, and oil twice a day. Rub your machine up twice a day with a hard waste brush and rub them every three to six months with kerosene oil on a Saturday after your work is done, and you will have what appears to be a new set of pickers.

Arrange your intermediate apron so that you can get the best results from that machine. Have your laps to run out, one at a time, on the apron every ten or fifteen minutes. If they will not run that long, you can run them out two at a time if you prefer. Have first lap on apron one-half full, second, full, third, one-half full, and fourth, full. This machine has a right to be noticed for it is making laps for the finisher.

Next, the finisher is an important machine, and it must be in the best trim to make laps for carding. The screens must be well looked after, and the dampers open according to the draft wanted. Keep the lumps out from between the end of rollers, so that there will not be any ragged or thin end laps.

"Mixture."

Number Twenty.

I N my opinion when you offer a prize for "Opening and Mixing" cotton, you have certainly touched upon the most important part of making good yarns. However, this question is given very little if any consideration by many men, in fact, we can visit many so called well managed mills and when the close observer gets to the mixing room they feel as though they want to either get out quickly, or else ston and tell the management a few things.

Of course, there are many mills running without ample room for mixing cotton stock, as it should be done. This is a great mistake and one in which any carder, however much he may know, can be easily handicapped to a great extent.

Let us suppose, however, that we have reasonable mixing room and running upland middling cotton, or cotton that will average middling. Of course we have our card room and spinners waste to use; and naturally are going to mix it in our pile of cotton.

We will also suppose, that in our warehouse, we have of this grade of cotton, both compressed and plantation packed bales of about equal number.

Now we must next take into consideration the few vital points of just what effect our mixing is going to have upon our yarn.

1st. If we mix all compressed bales and run them together, it will

throw our numbers too heavy, and while we are getting them down again, we have some slip by too heavy, with the result of uneven yarn and bad running work.

2nd. If we put in all plantation bales we have the same result; only we will go too light in our numbers.

3rd. And all important: This is to mix and blend our staple so as to give us good, even yarn; and thereby bring out all the strength in our staple.

Every manufacturer knows that there is no such thing as having staple all the same length, and in our roll settings, etc., it is not the short or medium staple that we must be governed by, but the longer ones which however are very much in minority, therefore, it is the short and medium staple that we must care for most particularly. And unless we begin properly in the mixing we can never get good and satisfactory results.

There is nothing better for opening of cotton from the bale than a good bale breaker attached to suction trunk.

But suppose we have none such, and are going to mix our cotton by hand.

We will take 20 bales of cotton, 10 compressed and 10 plantation. First I should spread on floor over a space something like 12 by 14 feet a thin layer of my card room waste, being careful to have it spread evenly.

I should open up and spread over this one of my compressed bales, being careful to have it shaken up very fine. Over this layer I should put in an even sprinkle of my spinners waste.

Next I should open up a plantation packed bale and put it over the pile, and then more card room waste. Then compressed cotton, spinners waste, plantation bale and repeat until my 20 bales were mixed, alternating as above.

This cotton pile should be built up square and nice. You should have at least 2 men on floor to throw the stock up, and same amount of men up on the pile to keep it well shook up and spread evenly.

When your mixing is completed let it stand at least 3 days, if possible, before using. Six days standing is better if you can spare the room.

When you come to use this cotton, never go on top and push it off, nor dig in one side with a rake. Pull down on the end, or side, being careful to cut all the way down straight from the top of the pile to the floor, thereby using some of each bale together with its proportion of waste at all times.

There can be volumes written upon this subject out of which can be found good food for thought, but if we mix regularly and follow as above outlined our yarns will be much evenner and stronger, and besides our dirt and leaf will separate from the fiber much easier than from many other various ways I have seen cotton mixed in the picker room.

I have found by mixing in this way I can use a much larger percentage of waste and short stock without fear of such bad results as solid laps and general unevenness all through my work.

Above all things in picking machines keep them properly cleaned; both outside and inside, in order to insure stock passing through evenly and not lumping or whirling between our beater and cages.

If the beaters are allowed to run with lumps of dirt accumulated on

ends of blades, we are sure of uneven laps. To avoid this raise beater covers morning and noon and with a piece of hard waste wipe well the inside of the machine underneath the beater boxes where oil will run down and collect dirt. Also wipe off beater blades and grid bars. Should a lump at any time form either on the beater or anywhere in beater box between feed rolls and cages, stop the machine immediately and remove same. Every yard of lap run under such conditions is sure to be uneven, more or less.

Close attention must also be given to the air currents, cages or screens, calender rolls and eveners.

Never speed a picker fan too high for this will pull your cotton too hard against the screen and give it a tendency to split when being wound off in the next process.

Keep your screens clear of dirt and fly. If necessary get an old hand card and card them off occasionally.

Examine your fan boxes and air channels at least once a week and remove any accumulation of dirt dust, etc., that has a tendency to obstruct the free passage of air.

Never allow your calender roll weight to get so low that they rest on the floor while your machine is in operation.

Keep your eveners well cleaned and balanced with a smooth belt running, not too tight. Never put too much pressure on your calender racks if you would avoid split laps.

The trouble is farther back, besides you will use unnecessary power and possibly you may either break a lap pin or calender rack.

I trust these few ideas may benefit some one.

Blue Jay.

Number Twenty-One.

THE question of opening and picking has a broad field for improvement and not until a few years ago, when some of our Southern mills launched out in the manufacture of fine goods did this question receive much thought.

In many of our latest mills we find separate buildings used principally for opening, with all the latest improvements for same.

While the hand opening is more expensive I believe it is more desirable for strong yarn.

Many of our fine yarn mills buy their cotton from samples sent in from cotton merchants rather than having an experienced grader go on the market and select same.

Where this rule is adopted the superintendent or overseer is the only one to see whether the cotton comes up to requirements, and every bale should be tested for staple and grade before opening and should any fall short of 1-16 inch staple, it should be set aside.

This selecting is as important on local cotton as staple cotton for many of our print cloth mills are making a success, using local cotton, by good selecting and careful mixing.

Where there is ample room cotton should be opened in large quantities, say 40 to 50 bales, and a layer taken from one bale, then another until the whole operation is completed, allowing no two layers to come in contact with one another from the same bale.

The attendant should be made to feed from front of pile, beginning at bottom and pulling down from top.

In regards to picker there are numerous causes for unsatisfactory work, such as improper cleaning of cotton, injury to staple, thick and thin places in laps, ragged selvage on laps, split laps, etc.

A lap may weigh correct and be uneven throughout its length.

In order for an automatic feeder to do its work satisfactorily it should be well cleaned and oiled and aprons should be kept tight to prevent slipping. The attendant should keep his hopper about two-thirds full all the time, about 400 to 450 is a good speed for doffer beater. These machines are usually equipped with a knife or porcupine beater running at from 1,200 to 1,350 revolutions per minute, according to stock worked.

Then we come to the finisher. This is our last and only hope of a perfect lap, and competent help plays an important part. I had rather teach a man that I can trust to work my laps correct and keep machines well cleaned and oiled, than to have a "know all" at any price.

Finishers are generally equipped with 18 inch two blade knife beater. Some use the carding beater or Kirshner as it is called, and run at a speed of 1,300 to 1,400 revolutions per minute.

The speed of the fan is another important thing and I think 950 to 1,000 revolutions per minute is a sufficient fan speed for most conditions. The cleaning bars or grids is another important place, for with improper setting of grids we cannot hope to remove the impurities and neps from our cotton, as this is the place to take them out. Don't put that duty on your cards.

I have always got satisfactory results from these setting on 13-16 staple. Ordinary two blade knife beater 1-4 inch, carding beater 3-16 inch. I set my grids 5-8 nearest feed roll and 3-4 on last bars from beater. The grids nearest feed roll should have the greatest opening between them.

There are several appliances on the market for split laps, but it is a question in my mind whether they are needed where the draft is properly regulated on the cages. The top cage should receive an excess draft over bottom, as this keeps the cotton from depositing too high on top cage, which is one cause of split laps. Too much waste in mixing is a frequent cause. Choked flues, soap or oil on friction break under horse head are other causes. Where these items are given attention a nice compact lap should be made. The evener motion should be set to make a lap the same weight from three laps up behind as from four. This is easily adjusted by the fulcrum lever moving out or in as the case may be, and having the cone belt to work near the center of cone when lap is right weight per yard. Aprons should be kept tight to prevent slipping. Cages and other parts should be looked after to see that there is no slipping or jerking taking place.

The finisher man should see that his laps run from one-third to full on aprons, not putting up his laps all at same time on back.

The selvage guide on front plate should be set to make a good selvage.

Cotton and dirt allowed to accumulate around ends of grids and feed rolls causes ragged selvage on laps. Incline cleaning trunks often become choked on account of fire in them and prevent cotton being delivered to next machine. This

often gives trouble but is easily detected.

When new pickers are started they should be perfectly level and beater bearings should be bedded for bearings once allowed to heat they often give trouble afterwards.

I always chalk the bearings on my pickers and lay my beater in and turn same with my hand and if the beater does not have the same bearing surface from one end of box to other I take a fine file and remedy the cause by filing off bottom of box wherever the wear shows.

I trust this article will be of some help to some of the many readers. M. V. J.

Number Twenty-Two.

I will start at cotton warehouse. Cotton should be at an average temperature. Don't get your cotton out of a warehouse one day and from under an open shed the next as this will tear up your weights.

The cotton buyer knows or should know what grade of cotton to buy for the number yarn you are making. We will say 7-8 inch to 1 inch staple for No. 20s to 30s yarn.

Select your cotton and mix ten or twelve bales in a pile. Look out for tinged and false packed bales. If you have a tinged bale mix one with nine good bales or a half if it is too bad.

Never open cotton between bin and hopper or bale breaker as there is danger of getting buckles and pieces of ties in machines and they are liable to strike fire.

The cotton should be taken off the pile straight down to the floor so as to get the advantage of the good mixing.

See that machines are oiled good. Keep oil holes cleaned out good. Use a good heavy oil in beater bearings and don't use too much, as it will get in the work.

Set evener so belt will run in center of cone. Clean out cages, fan boxes and beaters twice per day. Keep good beaters on checks at end of cages.

Beater blades should be kept sharp. Set all feed rolls 1-4 inch from beaters, this will give about 1-4 inch from bite. Set grid bars from beater 3-8 inch at top and 1-2 inch at bottom.

Finisher laps should not vary over 1-4 pound. In lapping aprons make all ends meet. Keep a good honest man on finishers and watch him close.

North Pole.

Number Twenty-Three.

I beg a small space in your valuable paper to mention a few points on the important subject of opening mixing and picking which is I think one of the most important subjects to the success of making even and smooth yarn and good running work throughout the mill.

The opening mixing and picking are no doubt too much neglected by some of us, however, all good mill men recognize a throughout opening, mixing and picking to be the foundation of cotton yarn preparation. (1) The cotton should be carefully graded and staple that varies more than 1-16 of an inch either way from what the machines are adjusted for should not be used to obtain the best results as the machines are set according to the staple desired and will damage staple of different lengths or cause an imperfect product, also a greater

loss in waste between the mixing and finished yarn.

(2) The object of mixing cotton from a large number of bales is to secure an economical production of uniform quality and color. In order to make a perfect yarn all the fibres should be of the same length, diameter, cleanliness and color. It is impossible however, to obtain cotton that will not vary in both the grade and staple and in order to neutralize this variation as much as possible a throughout mixing is resorted to. Cotton when in compressed bales is subjected to a great pressure and cannot be worked so advantageously as when it has had an opportunity to expand and assume its normal condition, by making a large mixing and allowing it to stand for some days before using. If the temperature of the opening room is about the same as the other rooms of the mill, the stock will run much more evenly from start to finish and make less waste.

(3) Method of mixing when made by hand as I have never used a bale breaker. However, I think all mills should be equipped with a bale breaker so the cotton can be more thoroughly opened. When using cotton of different grades in the mixing it should be averaged in the mixing so that no two bales of the same grade shall come in contact with each other. The first bale should be spread over all the floor space to be used for the mixing. The second bale spread to cover the first bale and the third bale to cover the second bale and so on throughout the whole mixing. By this means the mixing is built up of layers from each bale of cotton. When using the cotton it should be pulled away in small sections from the top to the bottom of the mixing so as to obtain a portion of each bale. The cotton should be taken from the bale in small bunches and torn up into a loose state not in large bunches or flakes as it does not assume its normal condition when in those large flakes, also this is expecting the automatic feeder to tear up those large flakes and feed a regular supply of cotton to the subsequent process which it cannot do. The result is we get very uneven breaker lap. However it takes a little more time and cost to get the cotton thoroughly opened but it is the means of less cost at the later processes and even and smooth yarn, good running work and this sure means success to the mill.

(4) To rework the waste such as is made at the fly frames and spinning room for the best results, take the two middle laps off of the intermediate and put waste laps in their place. The lap made is half waste. Then run this waste lap on the intermediate with three good laps. Then run this waste lap on the finisher with three good laps and by this means the waste is thoroughly mixed. It is impossible to evenly mix the waste in the mixing for it will come through in bunches and cause uneven laps. The reason for this is that the fibres are more parallel and lie closer and as the evener works by reason of the space between the feed roll and the scale plates, say this space is one half of an inch when the proper amount of cotton is passing between them, and a bulk of waste comes between the plates and feed roll the right thickness the evener will have no action on it as it was the right thickness but as the fibres are more parallel a greater weight has passed the evener and the result is a

very uneven lap. By giving this point a careful thought and studying the principle of the evener it is a plain case that the evener cannot produce an even lap unless the cotton is all in about the same state.

(5) The automatic feeder is the first machine that receives the cotton after it has been mixed. In order that the feeder may perform its best work it should be kept clean, the aprons kept taut and the bearings kept clean and well oiled. The hopper should be kept at least half full and should not be filled too full for the best results. If it is allowed to run down as a careless operator will do if he is not watched and the less cotton there is in the hopper the greater is the liability of the lifting apron securing an insufficient amount, thus causing a thin lap to be made and when the hopper is filled, if filled too full will cause it to feed too heavy and produce a heavy lap.

(6) The breaker, intermediate and finisher pickers have for their objects the separation of the matted mass of fiber into loose flakes and the removal of the motes, dirt, sand and leaf and producing of a lap. First the speed at which the beaters run and the blows per inch that the cotton receives is a very important point and the distance between the beater blades and the feed rolls.

For the breaker the beater should not strike the cotton over forty blows per inch, intermediate not over fifty and finisher not over sixty blows per inch. For the best results set the beater to the feed rolls on the breaker 3-16 of an inch, intermediate 1-8 of an inch, finisher 1-16 for a carding beater for 11-8 of an inch staple cotton. The action of the beater is one of the most important parts of picking for it is desired not only to clean the cotton but to do this with as little injury to the fibres as possible. The speed of the beaters must therefore be so regulated that it will not strike the cotton too often and thus injure the fibers, and should it be so low that they will not strike the cotton often enough and thus not clean it sufficiently.

(7) The evener motion is a very important item in making even laps. The segments should be kept clean so they will work freely. The entire evener motion should be kept clean at all times to insure it to work freely and prevent uneven laps. The evener belt should be perfectly pliable and have a good piecing and kept tight. A stiff evener belt will not work properly and will cause uneven laps. The proper adjustment of the evener is an important item. The cone belt should run on the center of the cone and any variation either way will then throw it from the center of the cone. The evener motion should be adjusted so it will make a lap the proper weight with three laps on the apron and this adjustment may be made by setting the dog to make a few laps with three laps on the apron and if they run heavy it indicates that the dog must be set back from the fulcrum and if too light it must be set closer to the fulcrum.

(8) Split laps are caused sometimes by improper division of the air currents and may be prevented by regulating air-currents to draw the cotton to the screens in such a proportion that the upper screen will receive an amount slightly in excess of that the bottom one receives for if the cotton is drawn to the screens in equal amounts the

lap will be formed of two layers of practically the same thickness and will be liable to split. Another cause of split laps is too much friction on the horse head and still another cause that sometimes happens is by allowing the air passages to become choked with waste or sand and thus the draft does not operate in properly. The passages should be kept clean at all times. Too much waste in the mixing will cause split laps as the waste has been worked and had the fibers all straightened out and has not the same tendency to stick together as the raw cotton.

9) Care of pickers, cleaning and oiling. Pickers should be kept well cleaned inside as well as outside. The inside should be cleaned out good before starting up in the morning and at noon they should be carefully oiled. In like manner the beaters, grid bars, inclined cleaning bars, and screens must be kept clean or the result will be lumpy laps. Hoping these few points which I have tried to give on this important subject will be the means of helping some one who is trying to learn, I am,

Try.

Number Twenty-Four.

THE opening of the American bale simply consists in cutting the ties, removing the bagging and ties and breaking up and shaking out, the condensed mass of cotton.

When the bale is opened the contents will be found in sheets or layers of condensed cotton due to the pressure exerted in baling. This cotton is hard and compact and before use must be allowed to expand.

One advantage claimed for the round lap bale is that several bales can be unrolled and fed to the opener or breaker picker at the same time. In this case, however, the mixing is not as extensive as it is when the cotton is taken from a pile consisting of many bales.

There is a machine in general use in England but comparatively little known in this country, called the bale breaker. This machine takes the condensed sheets of cotton as they come from the bale and tears them apart, delivering them in smaller pieces and allowing the cotton to open or expand in the process. A common type of bale breaker consists of an endless apron or lattice on which the sheets of cotton from the bale are placed. Directly in front of this traveling lattice is a revolving feed roll, which grasps the cotton from the lattice and passes it over the pedals to the first pair of fluted and toothed rolls. There are usually three pair of these rolls running at increasing speeds as the cotton passes from the back to the front of the machine. The mass is pulled apart as these rolls are driven by spur gearing and are positive in their action. The top roll in each case being weighted by stiff coil springs.

The surface speed of the middle pair of rolls is about three times that of the back roll and of the front rolls about seven times that of the middle roll which gives the surface speed of the front roll about twenty-one times that of the back roll or a draft of twenty-one. The draft of the bale breaker or the relation of the surface speeds of the front and back roll varies according to conditions, but is commonly from twenty to one to thirty to one or a draft of from twenty

to thirty.

Another form of bale breaking is a swiftly revolving beater with projecting arms and is employed to still further open the cotton and remove a portion of the heavier impurities.

The first process in the cotton mill after the bales have been opened is the mixing.

This is or should be a part of the process of every mill but in some cases its importance is underestimated.

By mixing we do not necessarily mean only the mixing of different grades or varieties of cotton but the mixing of different bales of the same grade and variety. This is absolutely necessary to produce the best result, for even when the different bales are of the same variety, the same grade and grown in the same locality, and supposed to be of the same length of staple, there are likely to be found slight differences in length, color and condition.

There is also a great difference in the amount of moisture in different bales. Some are too dry to work well and some too moist and by mixing the dry bales absorbs some of the moisture from the damp bales and a better average condition is secured. The mixing also allows the "opening up" or expanding of the condensed cotton, leaving it in better shape for the action of the beaters in the picking process.

The common method of mixing in this country is to provide extensive floor space back of the feeder, the larger the better, within reasonable limits.

When the bales are opened a sheet or armful of cotton is taken from one or more bales and scattered evenly over the floor. This is repeated with cotton from other bales until a pile or stack is formed containing enough cotton for several days run. This pile of cotton is composed of many thin layers, each layer representing a bale more or less.

When this cotton is fed to the machine it is taken in as nearly vertical section as possible, so that each armful will contain parts of several bales. In this way a very thorough mixing is secured, giving a uniform condition of cotton from start to finish.

Large mixings are to be preferred to small ones, the size being limited in many instances only by the floor space available.

Many modifications of this process are to be found in different cotton mills. In some cases the bales are opened in the storehouse and the cotton from several bales fed into the hopper of a distributor. From here the cotton is drawn by an air current through sheet metal pipes and delivered on the floor of the picker room back of the feeder. In some cases the mixing is done in large bins, which have movable floors so that as the cotton is used the stock can be moved forward to be at all times within convenient distance of the feeder and mixing can be carried on at the back of the bins.

In this case the cotton from several bales is thrown into the bin through a hole in the floor above.

With this arrangement the mixing is a continuous operation and can be performed at the back of the bin while the cotton from the front is being used.

In English spinning mills there are in many instances elaborate preparations for very large mixings, in some cases sufficient

amounts to last during a month's run. This is necessary on account of using different grades and varieties of cotton in which case the mixing of several kinds at a different price, each, to produce a certain result at a certain cost, becomes a fine art.

Variation in color or tint in the yarn produced is less liable to occur when large mixings are used.

When different cottons are to be mixed in exact proportions, or when a combination of colored and white cotton is used to produce a certain tint, the mixing can be done more correctly at the intermediate or finisher picker. This will be explained more fully later.

If mixed in stock the proportion of each would not run evenly from start to finish, therefore, producing yarn which would vary slightly in color from time to time.

Cotton that is grown in different localities varies in quality and as bales from widely separated districts are likely to be used in the same mill, careful selection is necessary.

Wide experience and good judgment are required to get the best results and to obtain as nearly as possible uniformity in quality.

Length of staple and for some varieties of work, color and character of cotton, is to be considered.

The bales to be used are placed on edge and the ties and bagging removed. They are then turned on their sides and a sheet of cotton taken from each in turn by hand and thrown into the cotton bin ready for the opener. By this means an average is obtained.

Cotton which is to be spun into fine yarn must be long staple, uniform in color, and clean, while that to be used for goods which are to be bleached may require long staple, while color and cleanliness are not so essential, but no rule for mixing the different varieties and grades can be followed.

Some mills use lower grades of stock than others for the same class of work with apparently equal results. In many of the smaller mills it is the custom to mix enough cotton to last three or four days or even longer if space in the opening and mixing room will permit, and by allowing it to air for several days an equalization of the moisture in the whole mass takes place.

In large mills, on the contrary, it is usually the practice because of the amount consumed, to take the cotton from the bales and throw it directly into the feeder of the opener.

It is not necessary to air the cotton as it is bought in large quantities and stored in cotton houses where it often remains for a long period and is therefore partially dried.

The first mechanical process the cotton undergoes is briefly stated to be the removal of as much foreign substance as possible, with the least injury to the fibres.

The foreign substances found are particles of sand which have been blown about and has become lodged in the boll, dirt which during a heavy rain has spattered upon the bolls which grow low upon the stalk, particles of dried leaves and stalks gathered in picking, pieces of seed and husk in ginning. You must take the cotton from each bale and grade it and see that it is shaken up fine by hand until the mixing is done at about 25 or 30 bales at a time for a good average work for 20s or 24s yarn.

Old Duster.

Number Twenty-Five.

"Mixing, Opening and Picking" cotton consists of five machine processes, in an up-to-date mill, for good grade of goods. All together, it resolves itself into top preparation, beginning with bale cotton as received from field. Therefore we take up first—Selection of Cotton.

First decide upon the number yarn going to make, then select yarn cotton accordingly. Usually short staple is used in coarser grades and for finer grades of goods use finer or longer staple cotton. The idea is not to get a cotton mixing with part three-quarter inch staple and part one and one eighth inch staple and think you can even up your mixing and get good work. It is impossible to make a short staple cotton any better by mixing with longer staple but it is very easy to reduce the value of the long staple by mixing with short staple.

Setting your rolls to get good work with such a mixing is impossible, for if you set close for your short staple you have cockle yarn and if you set open for your long staple your waste result will be appalling.

So in selecting cotton for any grade of goods get as near the same length staple as possible.

Cotton being selected take your bagging and ties off of several bales and make them ready for use. Now comes two systems in use in mills, and we will first treat of a mill using a blower system and opening the cotton in a building separated from the picker room.

In this system the opening may be done from 100 to 300 feet from the picker room, connected by a cotton conveyor, either a galvanized pipe or a terra cotta pipe line. If above ground use the former, if under ground use latter, with a glaze on it and cement the joints well with a good Portland cement. At picker room end of this conveyor there must be a suction fan to draw the cotton through the pipe line from the opener and a condenser to arrest its flight. This condenser consists of screen through which a great deal of dirt passes and is a great addition to the cleaning process, if it is kept clean and in proper working order.

Cotton is dropped from this condenser to the floor beneath and here you get your proper mixing.

Now back to the opener room. There should be several bales opened and fed to the machine, a little from each bale, thereby getting a thorough mixing when deposited on floor beneath the condenser. The opener usually consists of a conveyor apron and a spike apron to carry the cotton up to the draft box. Also a roll for knocking off the large lumps of cotton and assisting the spike apron in tearing up. This roll usually is a spiked or leather strip along a board to knock the cotton off.

In either case, the speed of roll should be so regulated that a row of spikes or a leather strip should come directly opposite a row of spikes on the apron traveling upward and should be set with not more than one inch clearance. This will prevent any large pieces of cotton being deposited in draft box to be blown over to picker room.

The amount of work these machines can do well is about 5,000 to 6,000 pounds in 10 hours. To do more than this will not give results desired.

Continued on page 14

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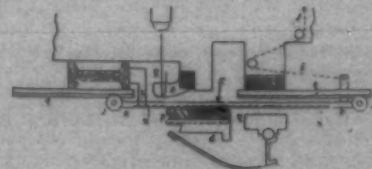
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THE ordinary plain fabric can show patterns in various ways, such as the work in of other threads of various colors either during the process of knitting or afterwards by sewing or embroidering other threads on to the fabric. On woven goods such embroidery can be done on piece goods; which are then cut up even into strips and sewn on goods; but in hosiery only the articles themselves were required to be embroidered and were done so for a long time by hand only.

About the year 1870 attempts were made to do embroidering by machinery. Large embroidering machines were used by stretching stockings into frames in such a way that many stockings could be embroidered simultaneously.

This proceeding has not been found satisfactory as the embroidery thread could not work loop by loop as by hand embroidery and patterns were irregular, particular-



ly when the work was stretched, so that hand embroidery is still holding the field.

The proceeding when embroidering by hand is as follows:—The seamed hose is pulled over a round peg, and the work stretches the thread, by means of a blunt needle, on to the fabric, carries it under various loops according to the design required. Such work is tedious and slow, and only used for best goods.

Then there is the process known as tambour embroidery. The flat hose, before being seamed, is pulled over a small frame screwed on to a table, the worker takes the thread with a crocheting needle with his right hand, he puts it through the fabric, lays the pulley over a small frame screwed on to a table, the face of the fabric.

This hand tambouring has been superseded by the embroidery stitch machine, whereby a girl can follow a design by means of a handle under the machine, or it is done by means of a cut cam made for special designs.

Embroidery can be done also on machines while knitting the goods, a colored thread being worked in as follows:—When a course is finished, a lace machine lifts several loops from the needles and pulls them a little forward from the needle heads, a number of yarn-guides lay their colored threads behind these loops and then the lace points transfer their loops again on to the needles. The hand frame was very successful with this class of work, but not the cotton machine driven by power, the goods made on these machines are still embroidered or tamboured by hand.

The newest way of embroidering is shown by the German Patent

162,181.

The flat frame works more after the style of big embroidering frames above described, that is to say, the unseamed stocking is stretched across the division on a cotton machine (it might be also a Paget or chain loom) as per sketch here shown.

The flat fabric was stretched on a frame and this frame is carried in carrier a, which runs with rolls c on slider b.

This carrier is pushed between the sinker bar d and the knocking-over cam e on to the machine, but of course, several parts would have to be altered which are not given in the details of the patent.

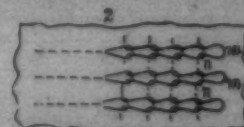
It would be necessary to remove the swings which are near h, and the levers and cams would have to be altered.

The rising needles k pierce the fabric w to receive the laid thread from the sinkers p, the needles go down again, are pressed by d and pull down the loops through the fabric.

The carriage now moves forward, by means of cord g and falling weight f, and is held fast by snappers or similar arrangements, after being moved by some tackle near i, so that the frame needles lay their loops under the fabric. The needles and loops of themselves would keep the carriage steady in its right place.

At their next rise the needles stop in their first loops, and during the forming of new loops they draw them through the fabric and through the old on the wrong side of the fabric loops are formed as shown by Fig. 2.

This wrong side of the fabric receives the needle loops and sides



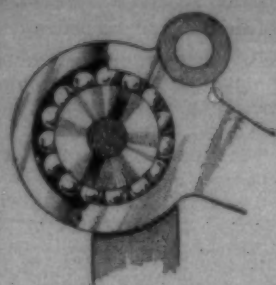
of the loops m, Fig. 2, and the face receives the sinker loops n.

The fabric must be so fixed in the machine that the part to be embroidered should be downward like X in Fig. 1, and in Fig. 2 the fabric is shown lengthwise at a degree of 180.

The loops embroidered in this way are not as regular loop for loop as the fabric on which they are put, but appear in any length desired, as in the tambour machine, and in regular straight lines.

The wrong side of the fabric gets the singer loops, and when the work is done on a chain loom the wrong side of the fabric would have a straight row of loops like a rug seam.

The patent also describes that the same embroidery might be worked on machines with latch needles.—Translated from German by Knit Goods.



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Cotton Goods in Bolivia.

Continued from page 3

this they always have some load which they are carrying to or bringing from market. The baby is carried in the same way, in the folds of the manta. The Indian women are very fond of bright, contrasting colors. For instance, a costume that attracts no notice in a Bolivian town is a green skirt with a red underskirt showing below, a blue bodice, a yellow manta, and another manta of orange with a pink-dressed baby in its folds.

Bolivia is entirely landlocked and all commerce with the outside world passes through the territory of its neighbors. The ports through which this commerce passes are Antofagasta, Arica, and Mollendo on the Pacific, and Buenos Aires and Para on the Atlantic. There are six main trade routes, three to each ocean, a discussion of which, in the order of their relative importance, follows.

Antofagasta Route.

Goods are imported by the Antofagasta route for central and most of the southern part of Bolivia. The Departments of Oruro, Cochabamba, Potosi, and Chuquisaca, in which are located the principal towns of Bolivia with the exception of La Paz, are supplied mainly by this route. The Antofagasta and Bolivia Railway runs from the Chilean port of Antofagasta 270 miles to the border town of Ollague, thence 108 miles

to Uyuni, and 195 miles farther to Aruro, a total distance of 573 miles. According to a treaty between Chile and Bolivia goods in transit to Bolivia are subject to Bolivian duties only and Bolivia maintains a customs agency at Antofagasta.

This customs agency receives the import duties in drafts on the place of consumption. It is interesting to note the proportion of goods imported through Antofagasta that are consumed at various places, as shown by these drafts. In 1908 the drafts received by the Antofagasta agency on the points named were valued as follows, in bolivianos: Cochabamba, 1,175,378.32; Oruro, 650,077.07; Sucre, 355,470.31; Uyuni, 292,467.50; Potosi, 151,798.09; La Paz, 57,145.07; total 2,682,336.36. From this it is seen that the bulk of the goods for Bolivia entered at Antofagasta are consumed in Cochabamba and Oruro Departments and that only a trifle goes through to La Paz.

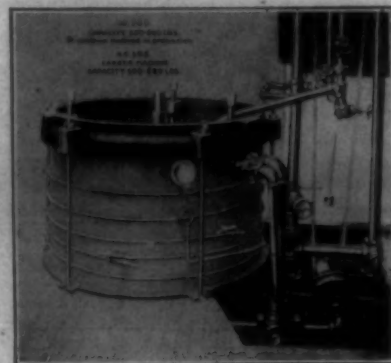
The trip from Antofagasta to Oruro usually takes three days, but a fast passenger train leaves Antofagasta every Monday at 6:40 p. m., and arrives at Oruro on Wednesday at 8:40 a. m., making the trip in 38 hours. Exports through Antofagasta, consisting mainly of tin and silver, originate at Oruro and Uyuni and all export duties are paid at these customs stations.

Mollendo Route.

The imports by the Mollendo route are mainly for the Depart-

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Agent Eastern States

ment of La Paz, but its importance is second only to that of the Antofagasta route. The South Peruvian Railway runs from Mollendo through Arequipa to Puno, a distance of 324 miles, and connects with steamers that go 180 miles across Lake Titicaca to Guaqui; from Guaqui the railroad runs via Viacha, 59 miles to La Paz. The trip of 563 miles from Mollendo to La Paz usually takes three and one-half days. For the convenience of passengers wishing to catch the boat for abroad there has recently been instituted a special service whereby passengers leave La Paz at 2 p. m., on Friday and are landed in Mollendo at 9:40 p. m., Saturday, or in 31 1/2-3 hours. The Peruvian train for this service consists of only a baggage car, mail coach, first-class car, and salon car, with extra charge for the latter. It takes first-class passengers only, and does not stop at the small stations.

By the terms of a treaty with Peru, goods in transit for Bolivia, pass through Peru duty free, and are examined and the duty collected only on arriving at the Bolivian customs at Guaqui. The chief exports from Bolivia by this route are tin, copper, and rubber; Bolivia's small export of gold also passes this way. Most of the rubber comes considerable distance by trail and river from Colonias Territory and Beni Department, so that it may go out by rail in preference to passing the dangerous rapids of the Madeira River.

Goods imported by the Arica route are mainly for La Paz and Oruro, but the difficulty of transport is so great that this route is not much favored, while the exports that clear at the two customs stations for this route are negligible. The present route runs 39 miles by rail from Arica north to Tacna, thence 180 miles by trail over the mountains to Viacha, which is 19 miles by rail from La Paz. The total distance is 338 miles and the trip usually takes nine to ten days. From Arica to Aruro via Tacna is 318 miles.

In accordance with the treaty arranged between Bolivia and Chile in 1904, the latter country is now construction a railroad from Arica to Viacha. Arica is the nearest port to La Paz and central Bolivia, and with the completion of this line Arica will become the main gateway to the country. This railroad will not touch Tacna, but will run from Arica by way of Lluta 126 miles to the border town of Visiviri, thence 131 miles to Viacha, where it joins the existing line to La Paz, the total distance from Arica to La Paz by this route being 276 miles. On June 1, according to the message of the Chilean President, there had been completed 79 kilometers (49 miles) from Arica and 76 kilometers (47 miles) from Viacha, and the road is expected to be completed and in operation by the end of 1911. According to the terms of the treaty, the Bolivian section will pass to

Continued on page 17

SOUTHERN TEXTILE BULLETIN

Offices: Room 1119 Realty Building, Charlotte, N. C.

Published Every Thursday by
Clark Publishing Company

DAVID CLARK
Managing Editor

SUBSCRIPTION RATES

One year, payable in advance	\$1.00
Other countries in Postal Union.....	2.00
Single copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

ADVERTISING

Advertising rates furnished upon application.

Address all communications and make all drafts, checks and money orders payable to the Clark Publishing Company, Charlotte, N. C.

Entered as second class matter March 2nd, 1911, at the post office at Charlotte, N. C., under the Act of March 3d, 1879.

THURSDAY, June 1

Passed the 2,000 Mark.

This week we are finishing the first three months of our publication and with it we are passing the 2,000 circulation mark.

In securing advertisements before beginning publication we guaranteed to our advertisers an average circulation of 2,000 for the first year and at the end of our first quarter we have reached that figure.

The support and encouragement that have been given us by the mill people has never been exceeded and we are deeply grateful.

The work of this quarter both in circulation and advertising has been very satisfactory, but there will be no halt in our work as we are on our way to a 5,000 circulation and also have an assurance of a big increase in our advertising patronage.

The Southern Textile Bulletin is just now taking the lead in Southern textile journalism and expects to hereafter hold that position.

The Period of Transition.

We are today facing what in our opinion will be the largest cotton crop, by fully one million bales, that has ever been raised in the South.

We do not claim to be crop experts but we are able to look at the situation from an unprejudiced standpoint and we pay absolutely no attention to the "dope" that is sent out by speculators.

A cotton crop is made up of two factors which are the numbers of acres and the yield per acre.

The government estimate of the acreage will not be issued until Friday of this week, but a number of the most reliable authorities have already placed the figures for this season at over 35,000,000 acres and from every State reports have been received indicating increased acreage.

North Carolina has not had an entirely satisfactory season up to date and there are no indications of an increased yield for that State, but from every other state come reports of splendid prospects.

Over 5,000,000 bales for Texas is a common estimate and men who have recently come from there tell us

that they have never seen such cotton before.

"Alabama will have a bumper cotton crop this year unless all present signs fail," says the Montgomery Advertiser, and from all over the South come similar reports.

We get the local papers from many small towns and we read the opinion of the country editor and his rural correspondent which unlike the "dope" sent out from New York by the speculators, is written for truth, and not for effect.

According to the fertilizer people, the amount used this year has broken all records and from the agricultural departments comes the statement that it has been used more scientifically than ever before.

Taking the cotton situation as a whole we find that we have reached the first of June under conditions that could hardly be improved.

We have a record breaking acreage planted with a record breaking amount of fertilizer and we find the stand and condition almost uniformly good.

While it is too early to predict the size of the 1911 cotton crop and there are many things that may happen, we do not hesitate to say the present indications are for fully 15,000,000 bales.

Drought or excessive rain or early frost may reduce the yield below this figure, but whatever causes the reduction must happen in the future.

In spite of the bull "dope" that is being sent out and in spite of the spectacular manipulation of Hayne upon the New Orleans Cotton Exchange few, if any cotton manufacturers are buying their fall and winter cotton at present figures.

The consumer of cotton goods is also looking at the same situation and even if conditions were normal, we could not expect large sales of yarns or goods at the present time.

In other words we are now facing a period of transition from high price cotton to at least a somewhat lower level and in such a period business is always restricted.

We do not expect cotton to go to an extremely low price but if the present conditions continue the law of supply and demand will force a lower level than now exists and anticipation of this is liable to bring the lower price earlier than is generally considered probable.

A marked improvement has taken place in the textile industry in Germany and England and we believe that eleven or twelve cent cotton will put the American mills in position to do a big export business with China and prosperity will be with us again.

Death of Jas. Lindsay.

Jas. Lindsay, of Philadelphia, Pa., died on May 17th at the age of 73.

He was the senior member of the firm of Lindsay, Hyde & Co., manufacturers of reels and other cotton mill machinery.

The Old Shell Game.

There will be speculative fluctuation in the price of options on the Exchanges; as soon as one crowd of suckers is made to pay the price for its temerity the movement will be in the opposite direction as an inducement for another crowd to try their luck at the old reliable shell game. —Daily Trade Record.

Program of Southern Textile Association Meeting.

The program committee of the Southern Textile Association announces the following as the part of the program of the July 1st meeting: "Efficiency of Operation and Waste Utilization," by Eugene Szepesi, of Boston, Mass.; "Electrical Specialist in Cotton Mills," by J. P. Judge of Baltimore, Md.; "Opening and Clean-Cotton," by J. E. Cheseman of New York; "The Weave Room," by Z. H. Mangum, of Gibsonville, N. C.; "Village Improvements," by J. F. Carbery, of Washington, D. C.

Further papers will be announced next week.

Tariff Committee.

R. M. Miller, Jr., chairman of the tariff committee of the American Cotton Manufacturers' Association has called a meeting of his committee for next Monday at Washington, D. C. It will be a joint meeting with the committee of the National Association of Cotton Manufacturers' and also one from Arkwright Club and the question of the cotton goods tariff will receive serious consideration.

The committee of the American Cotton Manufacturers' Association is as follows: R. M. Miller, Jr., chairman; D. Y. Cooper and Stuart W. Cramer, of North Carolina; A. H. Bahnson, of Virginia; Lewis W. Parker, J. D. Hammett and J. H. Morgan, of South Carolina; C. D. Tuller and T. I. Hickson, of Georgia; Scott Maxwell of Alabama; L. D. Tyson, of Tennessee; T. L. Wainwright of Mississippi; Paul J. Marrs of Kentucky and A. W. McLellan of Louisiana.

Greenville, S. C.—The Westervelt Mills' building construction is progressing steadily, and work on the second floor of the main structure is about to begin.

PERSONAL NEWS

L. B. Coleman is now located at Kankakee, Ill.

O. R. MacDaniel is now located at Henrietta, N. C.

Joe Morgan has moved from Lanett, Ala., to Stroud, Ala.

Holland Ross has moved from Marion, N. C., to Clifton, S. C.

J. L. Stirewalt has moved from Yorkville, S. C., to Chester, S. C.

Henry Adams, of Trion, Ga., has accepted a position at Lindale, Ga.

T. F. Floyd, of Berryton, Ga., has accepted a position at Lindale, Ga.

O. O. Edwards, of Pell City, Ala., has accepted a position at Trion, Ga.

Lester Morris has a position in the office of the Marion, N. C., Mfg. Co.

W. J. Biggs is now fixing looms at the Victory Mills, Fayetteville, N. C.

Buck Gordon has resigned as master mechanic at the Glenola Mills, Eufaula, Ala.

J. C. Gregory is now filling the position of head loom fixer at Lancaster, S. C.

R. Litoff has resigned his position with the Avondale Mills, Birmingham, Ala.

J. P. Hill has accepted the position of second hand in spinning at Caroleen, N. C.

C. E. Masingille has accepted the position of overseer of weaving at Arlington, S. C.

W. L. Stephens has resigned his position with the Avondale Mills, Birmingham, Ala.

C. E. Bailey is now overseer of spinning in Muscogee Mills Nos. 3 and 4, Columbus, Ga.

G. H. Watson has resigned his position at Quitman, Ga., and is now located at Pavo, Ga.

Tom Painter, night overseer of spinning at Marion, N. C., has been visiting at Union, S. C.

J. H. Merrit, of Pelzer, S. C., attended the Grand Lodge of K. of P.'s in Columbia last week.

Will Stewart has accepted the position as machinist at the Montala Mills, Montgomery, Ala.

J. L. Tucker has accepted a position as overseer of cloth room at the Clinton (S. C.) Cotton Mills.

W. K. Waits has been promoted to second hand in spinning at the Greenwood, S. C., Cotton Mills.

E. D. Burch has been promoted to overseer of picker room at the Saxon Mills, Spartanburg, S. C.

C. P. Stout has accepted the position of overseer of finishing at the Mineola Mills, Gibsonville, N. C.

John Brown has resigned his position as master mechanic at the Lowe Mfg. Co., Huntsville, Ala.

A. T. Williams is now filling the position of master mechanic at the Lowe Mfg. Co., Huntsville, Ala.

Jim Brooks is now second hand in weaving at the Chadwick-Hoskins Mill No. 3, Charlotte, N. C.

J. W. Prim has resigned as overseer of spinning at the Muscogee Mills No. 3 and 4, Columbus, Ga.

E. M. Holliday now has entire charge of the cloth room at the Dan River Mills, Danville, Va.

D. M. Tompkins, of Greenwood, S. C., is now overseer of spinning at the Seneca, S. C., Cotton Mills.

J. B. Meacham has accepted the position of overseer of spinning at the Elmira Mills, Burlington, N. C.

Robert Peacock, of Rockmart, Ga., has accepted the position of shipping clerk at the Aragon, Ga., Mills.

C. H. Amick has resigned as overseer of weaving at Arlington, S. C., and has moved to Greer, S. C.

CARDS,
DRAWING,

COTTON
MILL MACHINERY

SPINNING
FRAMES,

MASON MACHINE WORKS

TAUNTON, MASS.

EDWIN HOWARD, Southern Agent
Charlotte, N. C.

COMBERS,
LAP MACHINES

MULES,
LOOMS.

D. D. Little, President of the Marion, N. C., Mfg. Co., has recovered from a three months' illness.

A. C. Moss, of Marion, N. C., is now second hand in cloth room at the Gastonia Mfg. Co., Gastonia, N. C.

D. B. Summerlin, of Raleigh, N. C., is now fixing looms at the Highland Park Mill, No. 1, Charlotte, N. C.

H. G. Smith, superintendent of the Mills Mfg. Co., Greenville, S. C., has been visiting at Brevard, N. C.

Hugh Brewer has resigned as second hand in weaving at the Chadwick-Hoskins Mills No. 3, Charlotte, N. C.

J. A. Elkins, of the Pilot Mills, Raleigh, N. C., is now fixing looms at the Victory Mills, Fayetteville, N. C.

E. B. Brown, overseer of carding and spinning at the Ivey Mills, Hickory, N. C., paid us a visit last Saturday.

Kenley Rhoden has resigned as assistant roller coverer at Lanett, Ala., and is now located at Newberry, S. C.

M. T. Bennett of Wake Forest, N. C., is now second hand in spinning at the Harriet Mill No. 2, Henderson, N. C.

H. H. Chapman has accepted a position in the machine-shop of the American Spinning Co., Greenville, S. C.

J. T. McGregor, superintendent of Florence Mill, Forest City, N. C., spent last Sunday with his mother at his former home near Wadesboro, N. C.

B. T. Gladden, of the Holland Mills, Gastonia, N. C., is now grinding cards at the Dunn Mills of the same place.

S. A. Lovelace, of Danville, Va., is now second hand in weave room No. 2, Roanoke Cotton Mills, Roanoke Rapids, N. C.

S. S. Morrow has resigned his position of machinist at the Gaffney, S. C., Mfg. Co., and has moved to Chester, S. C.

H. T. Wallace, of Kannapolis, N. C., has accepted the position of overseer of weaving at the Ella Mills, Shelby, N. C.

J. A. Roak, of the Pomona Mills, Greensboro, N. C., is now fixing looms at the Patterson Mills, Roanoke Rapids, N. C.

Mr. Gegenheimer has resigned as overseer of the colored department of the cloth room at the Dan River Mills, Danville, Va.

R. C. Collins has resigned as overseer of spinning at Liberty, S. C., to accept a similar position at Fountain Inn, S. C.

Clarence Moss has been promoted from second hand to overseer of cloth room at the D. E. Converse Co., Glendale, S. C.

Alonzo Patrick, Glendale, S. C., has accepted the position of second hand in cloth room at the Hamrick Mills, Gaffney, S. C.

T. B. Murphy, of the Albany, Ga., Cotton Mills, has accepted a position as machinist with the Pelham, Ga., Oil Mills.

L. G. Dobson, of the Lancaster, S. C., Cotton Mills was called to Marion, N. C., last week by the death of his father.

Overflow Personals Page 16



Cramer System of Air Conditioning

WITH OR WITHOUT

Automatic Regulation of Humidity and Temperature

Moderate in Cost

Cheap to Operate

Yields Big Returns

STUART W. CRAMER

CHARLOTTE,

NORTH CAROLINA

MILL NEWS ITEMS OF INTEREST

Fayetteville, N. C.—The Tolar, Hart & Holt Mills are erecting a 50,000 gallon steel tank.

Columbus, Ga.—For a short period the Eagle and Phenix Mills will operate only three days a week.

Fort Wayne, Ind.—The Wayne Knitting Mills have increased their capital from \$1,000,000 to \$1,200,000.

Carrollton, Ga.—G. A. Stafford & Co. have been appointed sole selling agents for the cloth product of the Mandeville Mills.

Cuero, Tex.—The Guadalupe Valley Cotton Mills has awarded contract to D. J. Haynes Co., Houston, to erect an addition previously mentioned.

Greenville, S. C.—Woodward, Baldwin & Co., have been appointed sole selling agents for the Westervelt Mills. The mills will run on combed yarn goods.

Weldon, N. C.—The Shaw Cotton Mills have just started in operation eight spinning frames, two speeders and two cards, which they purchased from the Mason Machine Works.

Batesburg, S. C.—At the recent meeting of the stockholders of the Middleburg Mills the previously mentioned plan of increasing the capital stock to \$300,000 was passed.

Gastonia, N. C.—A fire which broke out Saturday night partially destroyed the waste house at the Holland Manufacturing Company's plant. The loss is between \$500 and \$800, partially covered by insurance.

Waco, Tex.—It is reported that the organization of the \$200,000 company recently mentioned as proposing to build the Waco Cotton Mills will be successful.

Waco business men are subscribing to the stock and it is expected that the company will soon effect organization.

Lindale, Ga.—Two hundred Draperlooms are now being installed by the Massachusetts Mills in Georgia. They are larger than any now in the mill and will make cloth 46 inches wide, thus enabling the mill to take orders for another line of goods, for which there is a steady increasing demand.

Evansville, Ind.—The plant of the Evansville Cotton Manufacturing Co. will be sold June 14 by order of United States Commissioner J. W. Wartmann. The company manufactured brown sheeting, batting and calking, the plant's equipment including 900 looms, 39,600 spindles and 76 cards.

Carrollton, Ga.—The Mandeville

Mills anticipate making important improvements and extensions. These include replacing old plain looms with the automatic looms and doubling the present No. 2 yarn plant. The company now operates some 18,000 ring spindles, 4,700 twister spindles, 120 looms, etc., employing steam power and 225 operatives.

Anniston, Ala.—H. F. Williamson, general manager of the plant of the American Net and Twine company at this place, has asked preliminary estimates on a projected increase in the capacity of his mill which will amount to 50 per cent, this being the second time the plant has been doubled in capacity since it was erected about 12 years ago.

Brenham, Tex.—The Brenham Cotton Mills and all property belonging thereto, have been sold at sheriff's sale and were bought in by W. W. Searcy, as trustee for the stockholders, for \$17,750. Arrangements are being made by the old stockholders to reorganize and purchase additional machinery and equipments and start the mill again at an early date, it is said.

Bessemer City, N. C.—The Secretary of State has chartered the Harbrough Company, Bessemer City, capital \$100,000 authorized and \$10,000 subscribed by J. W. Sanders of Alabama, Palmer Brown, Jr., Rhode Island, and O. F. Mason, Gastonia, for general cotton mill and textile business. This company will take over the Mascot Mill.

Nashville, Tenn.—An involuntary petition in bankruptcy has been filed against the Nashville Pants Manufacturing Co. by the following creditors, all of New York city: F. M. Hartley, \$471; Intervale Mills Corporation, \$157; Sol. Friedman & Co., \$943. It was previously reported that the concern was offering to settle at 25 cents on the dollar. Its liabilities are estimated at \$4,500 with assets of about \$700.

Suffolk, Va.—The Carr Mills, a new knit goods concern in this city last week organized with a capital of \$50,000. Officers were elected as follows: G. Lloyd Bell, president; M. C. Cross, vice president; F. A. Holaday, secretary; E. A. Everett, treasurer; G. A. Barbee and Lipman, directors; and J. O. Carr, manager and buyer. The company will at once let contracts for the construction of their plant.

Augusta, Ga.—The Riverside Mills, have completed the construction of their concrete platform and wall on the river front. This will protect the plant from possible damage by flood in the future and add to its cotton handling facilities. The work cost about \$6,000, the contractor being the A. H. McDaniel Co. of Augusta. The Riverside plant oper-

ates 90 cards and accompanying machinery on the production of batting, wiping waste, etc.

Columbus, Ga.—The Swift Manufacturing Co. is reported to have awarded contract to T. C. Thompson & Bro., of Charlotte and Birmingham, for the erection of two additional buildings, but no details as to character of construction, dimensions, cost, kind of machinery to be installed, etc., have been announced. The Swift plant is equipped with 18,190 ring spindles, 420 narrow looms, 35 broad looms, etc., for the production of denim, ticking, etc.

Knoxville, Tenn.—The annual statement of the Brookside Mills was as follows: President, James Maynard; treasurer Justin E. Gale. Report of March 31, 1911 shows: Assets—Real estate, \$541,350; machinery, \$996,500; merchandise, \$893,519; cash and debts receivable, \$134,245; total, \$2,565,614. Liabilities—Capital stock, \$900,000 (\$1,000,000 authorized); accounts payable, \$5,172; floating indebtedness, \$705,000; depreciation, \$101,000; profit and loss, \$851,442; total, \$2,565,614.

Senoia, Ga.—Last week the trial of the Senoia Duck Mills case, in an attempt of creditors to have the mills declared bankrupt, was begun in Atlanta, and continued all the week.

The case grows out of an attempt of Geo. P. Howard, of Atlanta, to collect the sum of \$45,000, alleged by him to be due by the mills on account of certain machinery installed in the mills, and for the collection of which amount suit is now pending in the city court of Newnan.

La Porte, Ind.—Construction work on the new dyehouse, picking building, wool scouring, drying and wet finishing building for the Wallace & Smith Blanket Mill is under way. The work is to be completed in about three months.

The dyehouse will have brick walls, concrete floors and a sawtooth roof. An overhead gangway from the second floor of the wool warehouse of the plant to the main mill will also be built. The sawtooth roofs over all the new buildings will be provided with skylight.

Charlotte, N. C.—The liquidation of the business of the Southern Pants Co., 215-20 South College street, by the American Trust Co., as receiver, is about completed, and it is figured that creditors will receive from 5 to 15 per cent more on their claims in addition to the 80 per cent already received. The exact amount of the final dividend depends upon the settling of the fire insurance resulting from a fire occurring there shortly after the appointment of the receiver and before the insurance policies were legally transferred to the receiver.

Spartanburg, S. C.—Meetings of the stockholders of the Pacolet Manufacturing Company and the Drayton Mills company were held in Spartanburg Wednesday of last week and the old officers of each mill were unanimously re-elected to serve the ensuing year. The directors did not meet so therefore the matter of paying dividends did not come up.

Victor Montgomery, president of Pacolet Mills, was re-elected, as well as B. W. Montgomery, assistant treasurer. A. B. Calvert was re-elected president of the Drayton Mills and G. Roquie re-elected vice president.

Griffin, Ga.—Schedules of the Central Mills, Inc., recently petitioned into bankruptcy, show liabilities of \$159,487, all unsecured except \$1,745 owing for taxes, and assets of \$206,744, as follows: Real estate, \$167,938; cash on hand, \$850; bills, notes and securities, \$31,027; stock in trade, \$200; office furniture, \$120; mill supplies, \$1,500; debts due on open account, \$5,089; bank deposit, \$19.

Among the creditors are the following: Spaulding Cotton Mills, \$909; Boyd-Mangham Manufacturing Co., \$14,200; Spaulding Cotton Mills, \$6,486; John W. Mangham, \$63; Boyd-Mangham Manufacturing Co., \$12,223; Towaliga Falls Power Co., \$359; R. O. Campbell Coal Co., \$64; Hodges Broom Works, \$40; Southern Belting Co., \$124; Lowell Machine Shops, \$4,145; Augusta Cream Sizing Co., \$25; Arnold Hoffman Co., \$69; Charlotte Supply Co., \$125; Carolina Supply Co., \$31; Fort Wayne Electric Co., \$29; Goldenes Foundry and Machine Works, \$55; Seydell Manufacturing Co., \$176.

Griffin, Ga.—Schedules of the Spaulding Cotton Mills, recently petitioned into bankruptcy, as noted, filed, show liabilities of \$202,378, all unsecured except \$2,456, owing for taxes, and assets of \$253,120, as follows: Real estate and mill plant, \$205,439; cash on hand, \$1,854; notes and securities, \$22,537; stock in trade, \$100; office furniture, \$731; implements and mill supplies, \$2,256; debts due on open account, \$19,960; equity in insurance policy, \$213; bank deposit, \$30.

Among the creditors the following are mentioned:

Boyd-Mangham Manufacturing Co., \$1,158; Central Mills, \$2,340; Cherokee Mills, \$500; W. J. Kincaid, \$5,125; J. J. Mangham, \$9,369; J. W. Mangham, \$8,875; J. J. and J. W. Mangham, \$13,371; Kincaid Manufacturing Co., \$146; Cotton States Belting and Supply Co., \$55; R. O. Campbell Coal Co., \$43; Hodges Broom Works, \$80; Southern Belting Co., \$288; Standard Oil Co., \$336; Gulf Refining Co., \$36; W. H. Bigelow, agent, \$41; Charlotte Supply Co., \$331; American Supply Co., \$31; Brown Bros. Co., \$71; Crompton Knowles Loom Works, \$506; Bewley

Darst Coal Co., \$158; Carolina Supply Co., \$222; Goldens Foundry and Machine Shop, \$218; Interstate Electric Co., \$41; Lowell Machine Shops, \$415; Acme Steele Goods Co., \$132; Textile Mill Supply Co., \$106.

Griffin, Ga.—The Boyd-Mangham Manufacturing Co., recently petitioned into bankruptcy, as noted, through its attorneys, Goodrich & Cleveland, has filed with the clerk of the United States District Court, W. C. Carter, schedules of its assets and liabilities, showing debts of \$325,303, of which \$2,644 is due for taxes, \$40,000 on preferred claims, and \$282,659 on unsecured claims, and assets of \$353,192, consisting of real estate, etc., \$251,219; cash, \$5,028; bills and notes, \$4,976; stock in trade, \$9,825; office fixtures, \$618; live stock, \$350; vehicles, \$50; implements, \$2,500; other personal property, \$40,000; debts due on open account, \$37,593; equity in insurance policy, \$250.

Among the creditors the following are mentioned: J. W. Mangham, \$518; Spalding Cotton Mills, \$2,685; Cherokee Mills, \$999; The Central Mills, notes for money furnished payable on demand, \$23,783; Spalding Cotton Mills, notes, \$15,940; J. J. Mangham, note \$6,150; J. W. Mangham, note \$11,267; J. J. & J. W. Mangham, note, \$4,500; Mrs. Ora B. Mangham, note, \$1,069; Mrs. Olive B. Mangham, note, \$1,500; J. M. Bawner, note, \$8,300; Charles Wheeler, note, \$6,000; Cotton States Belting & Supply Co., \$148; R. O. Campbell Coal Co., \$45; Hodges Broom Works, \$32; Southern Belting Co., \$246; Standard Oil Co., \$290; American Manufacturing Co., \$25; Arnold Hoffman Co., \$34; Deane Steam Pump Co., \$25; Augusta Cream Sizing Co., \$52; Bewley Darst Coal Co., \$105; Barber Colman Co., \$47; Charlotte Supply Co., \$122; Carolina Supply Co., \$63; Golden Foundry & Machine Co., \$70; Interstate Electric Co., \$57; Lowell Machine Shops, \$153; Seydell Manufacturing Co., \$25; Textile Mill Supply Co., \$86.

Want Factories For Texas.

It is understood that the Texas Commercial Secretaries' & Business Men's Association has begun a campaign for a \$1,000,000 factory investment in that state in 1912. It is claimed that Texas farmers haul \$1,200,000 worth of raw material to factories outside the state per day.

The association has issued a circular, which says in part: "It will take more than \$1,000,000 invested in manufacturing to work up the raw material now being shipped out of the State; we have only one-fifth of our area under cultivation and our minerals are practically untouched, but \$1,000,000,000 in quite sufficient for a starter.

"Texas is today the most inviting

Compressed Air Cleaning

One of our traveling men came in the other day with a story. Said the textile trade in general didn't know that we were contractors for compressed air cleaning outfits.

Of course

The Turbo Humidifier

(The Humidifier



with the Guarantee)

has absorbed so much of our attention that possibly we haven't made it clear that we do compressed air cleaning in factories that are already humidified.

We have made many installations of this sort and welcome inquiries in that line. You would be surprised how much can be done at comparatively small cost.

THE G. M. PARKS CO.

FITCHBURG, MASS.

Southern Office, No. 1 Trust Bldg., Charlotte, N. C.
B. S. COTTRELL, Manager.

Southern Cotton Mill Directory

PRICE \$1.00

We have on hand a few of the last edition, August 1st, 1910. This is the most convenient directory of Southern Cotton Mills. Pocket size

Clark Publishing Co.

CHARLOTTE, N. C.

field on the globe for capital, and when our opportunities are understood and our citizenship ready to welcome factory investments by patronizing their products, we will experience no difficulty in building up a civilization that will be the marvel of the twentieth century."

Comparative Cotton Movement.

New York, May 26.—The following statistics on the movement of cotton for the week ending Friday, May 26, were compiled by the New York Cotton exchange:

Weekly Movement.

	This Yr.	Last Yr.
Port receipts	41,159	56,585
Overland to mills and Canada	7,897	10,406
Southern mill takings (estimated)	25,000	15,000
Gain of stock at interior towns	22,984	19,965
Brought into sight for the week	51,072	62,026

Total Crop Movement.

Port receipts	8,336,032	7,023,795
Overland to Mills and Canada	903,132	771,249
Southern mill takings (estimated)	2,035,000	2,035,000
Stock at interior towns in excess of September 1	141,559	150,360
Brought into sight thus far for season	14,415,723	9,980,401
311 bales added to receipts for season.		

New Monaghan Y. M. C. A. Secretary.

F. McL. Burnett, secretary of the Mills Mill Y. M. C. A. has been elected assistant secretary of the Monaghan Association and will take up his new duties on the first of June. Mr. Burnett has been secretary of the Mills Association for two years and he is a man well fitted for the work. He will assist L. P. Hollis, who will have charge of all the Y. M. C. A. work for the Parker Mills Co.

Gluck Mills School Closing.

The closing exercises of the Gluck Mills school were held on Friday of last week, when an excellent program was well carried out. Each of the members had been well selected, and the pupils of the school acquitted themselves in a way that did credit to themselves and to their teachers.

To Check Child Labor.

Washington, D. C.—To prevent any carriers from transporting outside of any State the products of any factory, mine or mill in which children under 14 years old are employed is the purpose of a bill introduced by Representative Culp of Indiana.

AMERICAN MOISTENING COMPANY

BOSTON, MASSACHUSETTS

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BROWN AND BLEACHED COTTON GOODS FOR HOME EXPORT MARKETS

Excellent Location**for Establishment of Cotton Mill**

At a point in South Carolina, served by three railroads, we are in position to offer site for cotton mill, and will arrange with proper parties for the subscription of one-half the stock of a large mill.

Full particulars on request to

J. W. WHITE

General Industrial Agent, Seaboard Air Line Railway
NORFOLK, VIRGINIA.

OPENING, MIXING AND PICKING

Continued from page 7

Cotton passing through pipe line becomes open so that in coming to condenser you can have a large percentage of dirt taken out through the condenser screen if it is kept in good shape as mentioned above.

In mills where the opening of bales is done in picker room there should be several bales opened on space floor or in bm. I want to impress upon the reader here that he cannot do this kind of mixing half good enough at best, and a machine opener such as described above even if done in same room with picker, with the condenser and fan attached to ceiling, would be a good investment.

Even the mixing done by hand is sadly neglected by many mills and a good many times the fault is laziness in the help, who will not break the cotton properly. The writer knows from experience this is not easy work and it is not an easy job to get the help to do it, but it should be done.

I guess a portable bin is all right to mix cotton in. I have seen writers mention them but I have never seen one. I think a great deal of floor space would be required for these.

Now if we have our mixing done properly we begin to pick the cotton. A picker with its trunk arrangement should be looked after carefully and kept clean. The idea here is to pick your cotton still finer than is done by any preceding process and the cleaning must take out the dirt and the other foreign matter that has been forced from the fibres.

Do not draw your cotton through cleaning trunk too fast or you will lose the cleaning effect. Have your fan in breaker, that does the drawing cotton from picker, speeded just so the cotton will not choke in the cleaning trunk.

Now as to beaters. Nearly everybody has an idea about beaters. I prefer for my picker a good porcupine beater and for breaker a two blade beater and same for the intermediate. If work is properly done when it comes to finisher I should prefer a two blade there, but if your other beaters preceding are not kept sharp and given good

attention I find a Kirshner or carding beater helps here.

For a light lap from the breaker and intermediate, you usually do not need this beater, and I would rather have a plain one.

The work for beaters to do is hard and severe on bearings and these should be looked after carefully, in fact all bearings on pickers and lappers should be given close attention and kept clean for fires might start from a dirty bearing.

Now we will look into the breaker and will say that this machine is just as important as the ones to follow. While it has no eveners cones and belts, the even work that picker might do can be spoiled here if not careful. This machine has the cotton delivered usually from a cage above a lattice apron and cotton drops on this apron which carries it to feed rolls. Now the deposit of cotton on this apron should be so regulated that your feed rolls will take care of it at all times. If not you are liable to have broken gears and even if not broken gears your breaker lap will be thick and thin.

Too much stress cannot be placed upon the cleanliness of the cotton and the evenness of the lap to this point as your breaker laps should be so regular that your eveners belt on your intermediate will take care of it without a shift of over 6 inches from lightest to heaviest, and your finisher cone belt should never be required to shift over 1 1/2 inches each way from center. If over this your machinery is wrong somewhere.

A great many mills are having trouble right here and their eveners are working well but they cannot get even laps when eveners are required to work the belt from one end of cone to the other.

Have you ever stopped to think what one inch of thin or thick lap would do, or how much you have in yarn that will be under size. It is somewhere about 75,000 to 85,000 yards.

If any reader has an evener working from one end of cone to the other, stop it. It is wrong and should not have to do this. There is a trouble with the working of your stock some place and if you find it

Cotton Goods Report

Philadelphia, Pa.—Prices are firmer and some increased activity has been noted in the cotton goods market during last week.

Many seem to think that this situation is only the forerunner of businessness that is to follow and it is predicted that as soon as Western jobbers take their June inventories they will become good buyers.

It is said that the condition of stocks of both jobbers and retailers is such that even should a moderate inquiry for goods appear from the consumer, the mills would have difficulty in meeting the demand upon them.

There is little doubt that some of the largest buyers in the market have begun to realize that manufacturers are in earnest regarding their statements that they will not continue to make up goods under existing conditions.

Several well known lines of gingham will probably be priced for spring of 1912, during the next few weeks, but indications are that there will be no changes from last seasons prices.

Export business has hown little activity during the past week. China has placed no orders of any size although it is said that they are now in the market for drills and sheet-

ings, and good inquiries are reported from several quarters. No business was done with Red Sea markets, although India is estimated to have taken around 1,800 bales. The inquiry for three yard drills and sheetings from these markets is said to be good and houses here are reported to be holding prices firm at 1-4 to 3-8 advance over prices that were current when the last contracts were taken. South American markets were buyers in a small way, but no material change was noted. Moderate sales were made in the Fall River print-cloth market at prices better than those of the week previous. The advanced prices are still much lower than a satisfactory range with the price of cotton up where it is.

The total sales for the week are placed at about 185,000 pieces in the best estimate. Early in the week the demand was quiet, but for several days it has gained strength. Manufacturers checked its rapid incline by declining very generally to sell at prices of the week previous and insisted upon advances of a sixteenth to an eighth of a cent.

About a third of the goods sold were spots. The remainder were mostly for June and July delivery, though some of the contracts run into and through August.

Current prices are quoted in New York as follows:

Print cloths, 28-in, std.. 3% to ..
28-in, 64x60s 3 1/2 to ..
Gray goods, 39-in, 68x72s. 5 9-16 to ..
38-in, std..... 5 1/4 to 5 3-16
Brown drills, standards 8 1/4 to ..
Sheetings, south std.. 8 1/4 to ..
3-yard 7 1/2 to ..
4-yard, 56x60 6 1/4 to ..
Denims, 9-ounce..... 14 to 17
Stark, 8-ounce duck.... 13 1/2 to ..
Hartford, 11-ounce 40-in
duck 17 to ..
Tickings, 8-ounce 13 1/2 to ..
Standard fancy prints.. 5 to 5 1/2
Standard gingham 7 to ..
Fine dress gingham 7 1/2 to 9 1/2
Kid finished cambrics .. 3% to 4

you have done enough for a few days vacation, but find it. Anybody can make an evener belt work but it takes a good man to find how to relieve them of having to do so much work. Hold a few yards of lap up before a window and see that the farther your evener works the worse your lap. Now your screens should all be kept clean and tight upon shaft and not allowed to slip in any way. Your fans should be run just as near right to draw the cotton to the screen cage and not draw the dirt and foreign matter loosed or set free by the beaters.

If your callender rolls are well regulated, draft and machine kept clean and oiled well, you will not have much trouble with split laps.

There are going to be times when your laps will split no matter how you have your machine set, but there are several preventers now on the market and some of them are really worth the price.

All beaters should be set according to length of staple of cotton used and set so as not to break the staple, at the same time giving the cotton a good clean stroke so as to loosen dirt and trash.

Grids should be set so that beater in carrying cotton around will push the fleece against the bars and the dirt should pass out to the mote box.

In a nut shell, keep all bearings clean and oiled well. Keep beaters sharp, keep screen cages clean, keep all aprons free from slip and in good repair. Get a good mixing. Get a good man to look after machines. Don't let your man overload any machine. Don't allow any old thing pass for good enough, because you get a lap finished.

"Look Out.

Secretary Hester's World's Visible Supply Statement.

New Orleans, May 26.—Secretary Hester's statement of the world's visible supply of cotton, made up from special cable and telegraphic advices, compares the figures of this week with last week, last year and the year before. It shows a decrease for the week just closed of 110,412, against a decrease of 112,233 last year and a decrease of 115,695 year before last.

The total visible is 3,117,579, against 3,327,991 last week, 3,131,408 last year and 3,954,848 year before last. Of this the total of American cotton is 1,934,579, against 2,045,991 last week, 1,965,408 last year and 3,032,848 year before last, and of all other kinds, including Egypt, Brazil, India, etc., 1,183,000, against 1,182,000 last week, 1,166,000 last year and 922,000 year before last.

The Yarn Market

Philadelphia, Pa.—While business cannot be said to be booming or to have shown any radical improvement during the past week, there is certainly a much better feeling throughout the yarn market. Very few dealers are expecting any decline in prices during the summer and a great many are predicting a high range of values.

There has been a notable tendency recently among spinners to advance their prices even though buyers have declined to follow.

Deliveries on old contracts were good during the week, and there are no accumulations in storehouses; weavers and knitters generally accepted deliveries and a few furnished spinners with specifications on old contracts.

The price of cotton will continue to be a factor in the price of yarns and increased prospects for a large crop will tend to make yarn consumers hold back their orders.

Southern Single Skeins:

8s	20 1-2
10s	21
12s	21 1-2
14s	21 1-2
16s	22
20s	22 22 1-2
26s	24
30s	25

Southern Two-Ply Skeins:

4s to 8s	21
10s	21 21 1-2
12s	21 1-2 22
14s	21 1-2 22
16s	22
20s	23 23 1-2
24s	24
26s	24 1-2
30s	26
40s	30
50s	36 36 1-2
60s	43

Carpet and Upholstery Yarn in Skeins:

8-3 hard twist	21
8-4 slack	21 1-2
9-4 slack	21 1-2 21

Southern Single Warps:

8s	21
10s	21 1-2
12s	21 1-2 21 3-4
14s	22
16s	22 1-2
20s	22 1-2
24s	23 1-2 24
26s	24
30s	25 25 1-2
40s	30

Southern Two-Ply Warps:

8s	21
10s	21 1-2
12s	21 1-2 22

14s	22
16s	22 1-2
20s	23 23 1-2
24s	24 24 1-2
26s	24 1-2 25
30s	26 26 1-2
36s	28 1-2
40s	30 1-2 31 1-2
50s	36 36 1-2

Southern Frame Spun Yarn on Cones:

8s	20 1-2 21
10s	21 1-2 21 3-4
12s	21 3-4 22
14s	22 22 1-2
16s	22 1-2 23
18s	23
20s	23 1-2 23 3-4
22s	24
24s	24 1-2 25
26s	25 1-2
30s	26 26 1-2
40s	30 30 1-2

Single Skein Carded Peeler:

20s	25 25 1-2
24s	26 1-2 27
26s	27
30s	30
36s	32
40s	33
50s	39
60s	45

Two-Ply Carded Peeler Skeins:

20s	25 1-2
22s	26
24s	26 1-2 27
26s	27 1-2 28
30s	30
36s	32 32 1-2
40s	33 33 1-2
50s	39
60s	44 45

Single Combed Peeler Skeins:

20s	30 30 1-2
24s	33
30s	37
40s	42 43
50s	50
60s	59 60

Two-Ply Combed Peeler Skeins:

20s	29 30
24s	32
30s	36 38
40s	41 42
50s	48 50
60s	56 60
70s	67 70
80s	74 77

What He Would Pay to Hear.

"Clemens," said a friend to Mark Twain, some years ago, "wouldn't you like to go and hear Ingersoll on Moses this evening?"

"No," replied the humorist, "I wouldn't give ten cents to hear Ingersoll on Moses, but I would give ten dollars to hear Moses on Ingersoll."—Exchange.

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Charlotte, N. C.

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Southern Mill Stocks, Bank Stocks,

N. C. State Bonds, N. C. Rail-

road Stock and Other High

Grade Securities

South Carolina and Georgia Mill
Stocks.

	Bid	Asked
Abbeville Cotton Mills	70	75
Aiken Mfg. Co.	85	
American Spinning Co.	160	
Anderson Cot. Mills pfd	90	
Aragon Mills	65	
Arcadia Mills	95	
Arkwright Mills	100	
Augusta Factory, Ga.	60	65
Avondale Mills, Ala.	116	120
Belton Cotton Mills	125	
Brandon Mills	80	90
Brogan Mills	61	
Calhoun Mills	61	
Capital Cotton Mills	80	85
Chiquola Mills	167	
Clifton Mfg. Co.	100	
Clifton Mfg. Co., pfd.	95	
Courtenay Mfg. Co.	95	
Columbus Mfg. Co., Ga.	92½	100
Cox Mfg. Company	70	
D. E. Converse Co.	100	
Clinton Cotton Mills	125	
Dallas Mfg. Co., Ala.	110	
Darlington Mfg. Co.	75	
Drayton Mills	90	95
Eagle & Phenix Mills, Ga.	117	
Easley Cotton Mills	160	165
Enoree Mfg. Co.	50	
Enoree Mfg. Co., pfd.	100	
Enterprise Mfg. Co., Ga.	75	
Exposition Cot. Mills, Ga.	210	
Fairfield Cotton Mills	70	
Gaffney Mfg. Co.	65	
Gainesville C. M. Co., Ga.	80	
Glenwood Mills	140	
Glenn-Lowry Mfg. Co.	104	
Glenn-L. Mfg. Co., pfd.	95	
Gluck Mills	104	
Granby Cot. Mills, pfd.	38	
Graniteville Mfg. Co.	160	165
Greenwood Cotton Mills	57	59
Grendel Mills	100	
Hamrick Mills	100	
Hartsville Cot. Mills	190	
Inman Mills	110	
Inman Mills, pfd	104	
Jackson Mills	95	
King, Jno. P. Mfg Co., Ga	85	100
Lancaster Cotton Mills	130	
Lancaster Cot. Mills, pfd	98	
Langley Mfg. Co.	110	
Laurens Cot. Mills	125	
Limestone Cotton Mills	175	
Lockhart Mills	70	
Marlboro Mills	80	
Mills Mfg. Co.	90	93
Mollohon Mfg. Co.	105	
Monarch Cot. Mills	105	
Monaghan Mills	101	
Newberry Cot. Mills	125	140
Ninety-Six Mills	140	
Norris Cotton Mills	120	
Olympia Mills, 1st pfd.	90	
Orangeburg Mfg. Co., pfd	90	
Orr Cotton Mills	96	
Ottaray Mills	100	
Oconee common	100	
Oconee, pfd	100	
Pacolet Mfg. Co., pfd.	100	
Pacolet Mfg. Co., pfd.	100	
Parker Mills, Guar.	100	
Parker Mills, pfd.	85	
Parker Mills, Com.	50	
Piedmont Mfg. Co.	162½	

North Carolina Mill Stocks.

	Bid	Asked
Arlington		140
Atherton		
Avon		98
Bloomfield		110
Brookside		105
Bloomfield		110
Brown Mfg. Co.		95
Cannon		125
Cabarrus		135
Chadwick-Hoskins		100
Chadwick-Hoskins, pfd.		102
Clara		110
Cliffside		190
Cora		135
Dresden		136
Dilling		
Eldred		100
Elmira, pfd		100
Erwin, pfd		102
Florence		126
Flint		116
Gaston		90
Gibson		70
Highland Park		200
Highland Park, pfd		101
Henrietta		170
Imperial		101
Kesler		125
Linden		140
Loray, pfd		90
Lowell		200
Lumberton		261
Mooreville		125
Medena		100
Nokomis, N. C.		200
Ozark		110
Patterson		110
Raleigh		102
Roanoke Mills		
Salisbury		136
Statesville Cot. Mills		96
Trenton, N. C.		
Tuscarora		110
Washington, pfd		106
Washington		30
Wiscasset		103
Woodlawn		100
Pelzer Mfg. Co.		162½
Pickens Cotton Mills		92
Piedmont Mfg. Co.		170
Poe, F. W. Mfg. Co.		115
Riverside Mills		25
Saxon Mills		127½
Sibley Mfg. Co., Ga.		60
Spartan Mills		130
Toxaway Mills		72
Tucapau Mills		260
Union-Buffalo Mills, 1st pfd		55
Union-Buffalo Mills, 2d pfd		15
Victor Mfg. Co.		112
Ware Shoals Mfg. Co.		80
Warren Mfg. Co.		95
Warren Mfg. Co., pfd.		100
Watts Mills		95
Whitney Mfg. Co.		120
Williamston Mills		120
Woodruff Cotton Mills		115
Woodside Mills		97½

Personal Items

(Continued from page 19)

W. D. Austin is now section hand in spinning at Highland Park Mill No. 3, Charlotte, N. C.

M. O. Alexander, superintendent of the Woodside Mill at Greenville, S. C., was visiting relatives in Charlotte last Sunday.

E. R. Cash, superintendent of the Hamrick and Limestone Mills, Gaffney, S. C., has purchased a handsome Maxwell automobile.

J. C. Moore, of King's Mountain, N. C., has accepted the position of overseer of carding and spinning at the Ella Mills, Shelby, N. C.

W. H. Hudson has resigned his position as loom fixer at the Locke Mills, Concord, N. C., and is now located at Wilmington, N. C.

W. O. Tyndall, of the Holt-Wilkinson Mills, Fayetteville, N. C., is now second hand in spinning in the Victory Mills of the same place.

B. M. Stallworth, manager of the Paolet Mills at New Holland, Ga., has been elected president of the Chamber of Commerce of his town.

H. B. Rollins has resigned his position as second hand in the dye house at Locke Mills, Concord, N. C., and returned to his home at Fayetteville.

E. E. Fulk has resigned as assistant overseer of dyeing at the Patterson Mills, Roanoke Rapids, N. C., and has accepted a position in Philadelphia.

L. E. Beckom, of the Pomona Mills, Greensboro, N. C., has accepted the position of overseer of drawing-in at the Patterson Mills, Roanoke Rapids, N. C.

M. L. Capps has resigned as overseer of cloth room at the Clinton, S. C., Cotton Mills on account of ill health, and is now located near Greensboro, N. C.

W. M. Caudle has resigned as master mechanic at the Osage Mills, Bessemer City, N. C., and has accepted a similar position at the Mills Mfg. Co., Greer, S. C.

L. O. Bunton has resigned as overseer of cloth room at the Monroe, N. C., Cotton Mills, and has accepted a similar position at the Avon Mills, Gastonia, N. C.

Walter H. Bradley, who has become manager of the French Broad Mfg. Co., Asheville, N. C., was formerly superintendent of the Androscoggin Mills at Lewiston, Me.

J. H. Gault, treasurer and manager of Excelsior Knitting Mills, Union, S. C., attended the National Association of Hosiery and Underwear Manufacturers' Convention, in Philadelphia, last week.

Field Day at Easley Mills.

Field Day was held for the Easley Mill, Easley, S. C., school on May 13th. The pupils took a great deal of interest in it and seem to appreciate taking part in these contests. The records made were good and better order was never seen. These contests were conducted by Prof. Burtis assisted by the high school boys.

Carter Was There.

In giving a list of those present at the recent meeting of the American Cotton Manufacturers' Association at Richmond, Va., we omitted to mention A. B. Carter, the Southern representative of the Victor Shaw Ring Traveler Co. He was very much there and renewed many old acquaintances.

Mr. Carter was for five years the traveling representative of the old Southern & Western Textile Excelsior and few men have a larger mill acquaintance.

Attempted Assault on Mill Girl.

Charged with attempting to criminally assault a deaf and dumb girl, who is also partially unbalanced mentally, Jake Bostin, a young white man who claims both Salisbury and Oldfort, N. C., as his home, was placed in the county jail at Spartanburg, S. C., Sunday afternoon and a warrant was immediately issued making formal charges.

The attempt was made at a point about midway between Drayton Mills and Rock Cliff park. The young unfortunate and afflicted girl was at the park and was returning to her home at the mill. It is alleged that Bostin followed the girl when she left the park and, on reaching a secluded spot, accosted her.

Picnic at Merrimack.

A most enjoyable day was spent by the children of Merrimack Mill, Huntsville, Ala., school at their annual picnic Thursday at Braham spring Park. There was an abundance of good things to eat and every person present entered with enthusiasm into the pleasures of the day, under the direction of our popular corps of teachers.

One of the most pleasant diversions of the day was that upon the arrival of Agent Joseph J. Bradley and Mr. Lawrence Cooper, the children all crowded around Mr. Bradley's auto, loudly cheering for the Merrimack Company and for Mr. Bradley. Mr. Bradley, after a short talk, called upon Mr. Cooper to present the medals which had been offered for the term just-ended.

The Merrimack Medal, to the scholar making the best average in all studies was awarded to Nina Thornberry. The Lyman Medal, for the girl making the highest average in English, was awarded to Myrtle Miller, and the Bradley Medal for the boy making the highest average in mathematics, was awarded to Everett Rancy.

Monaghan Y. M. C. A. Work.

The following figures which are taken from the annual report of Secretary L. P. Hollis of the Monaghan Y. M. C. A. give some idea of the work which is being done by that organization:

Physical.

Enrolled in gymnasium class..	73
Number classes	56
Attendance	1,052
Basket Ball teams	7
Base Ball teams	5
Volley Ball games	46
Hikes	7
Base Ball games	66
Basket Ball games	52
Baths taken	8,123

Educational.

Night classes	8
Teachers employed	8
Students enrolled	112
Number classes	305
Total attendance at classes....	4,220
Educational clubs	3
Practical talks	14

Religious.

Men's Meeting	32
Attendance	805
Boys' Meetings	41
Attendance	1,051
Bible classes	2
Conversions	13

Social.

Visits to Rooms	34,122
Socials	14
Attendance	1,022

Games were used freely.

Emergency Speed Control.

The steam turbine is new compared with the reciprocating engine. Nevertheless, makers of steam turbines realize that they must have some device to prevent excessive speed. One of our largest concerns which manufacture steam turbines has already changed their emergency speed controller several times. Perfecting their latest device has required much time and a large expenditure of money. They know, however, that it will pay in the end.

There is no excuse for allowing the old reciprocating engines to run without some form of emergency governing device. The normal speed of the old mill engines is slow, and they are designed accordingly. If something goes wrong with the regular governor at the same time that the load is suddenly removed, serious accidents result.

It is wonderful that engines which have no speed limit attachment do not more often run wild and destroy property. The number of fly wheel accidents is large and can be reduced. An operating engineer in speaking of an automatic engine stop remarked that it had never been used since he had worked for the company. He was asked if the arrangement was ever tested; to which he replied, "Oh, my, yes; it pays to keep that apparatus in perfect condition."

Some automatic engine stops are in use whose benefit to the plant is questionable. The principle of the arrangement may be satisfactory, but it is put together poorly and may refuse to operate. Automatic engine stops which may fail are worse than none.

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Simplicity is the one essential requirement for an automatic device. If the operation depends upon an electric current, this current must be generated by some reliable method. Your automobile refuses to move. How often the trouble is in the battery! If you have an electric stop motion on your engines, make sure that the electric current is always on tap. Test the apparatus twice or three times each day. Use the best apparatus and then give it the best possible care. —Wool & Cotton Reporter.

A Merger.

"I don't now whether to accept this testimonial or not," mused the hair restorer man.

"What's the matter with it?" demanded the advertising manager.

"Well," explained the boss, "the man writes: 'I used to have three bald spots on the top of my head, but since using one bottle of your restorer, I have only one.'" —Philadelphia Record.

A woman went to a physician to have her throat examined. The doctor brought out an instrument and started to look down her throat.

"What kind of a thing do you call that?" asked the woman.

"That," explained the physician, "is what we call an orinoscope."

"And what is it for?" continued the woman.

"I use it so I can see down your throat. You have no idea how far I can see with this instrument," said the physician.

The woman jumped up and started for the door.

"Where are you going?" asked the physician, in surprise.

"I'm going down to the store for a new pair of stockings; there's a hole in one of these I have on." —Exchange.

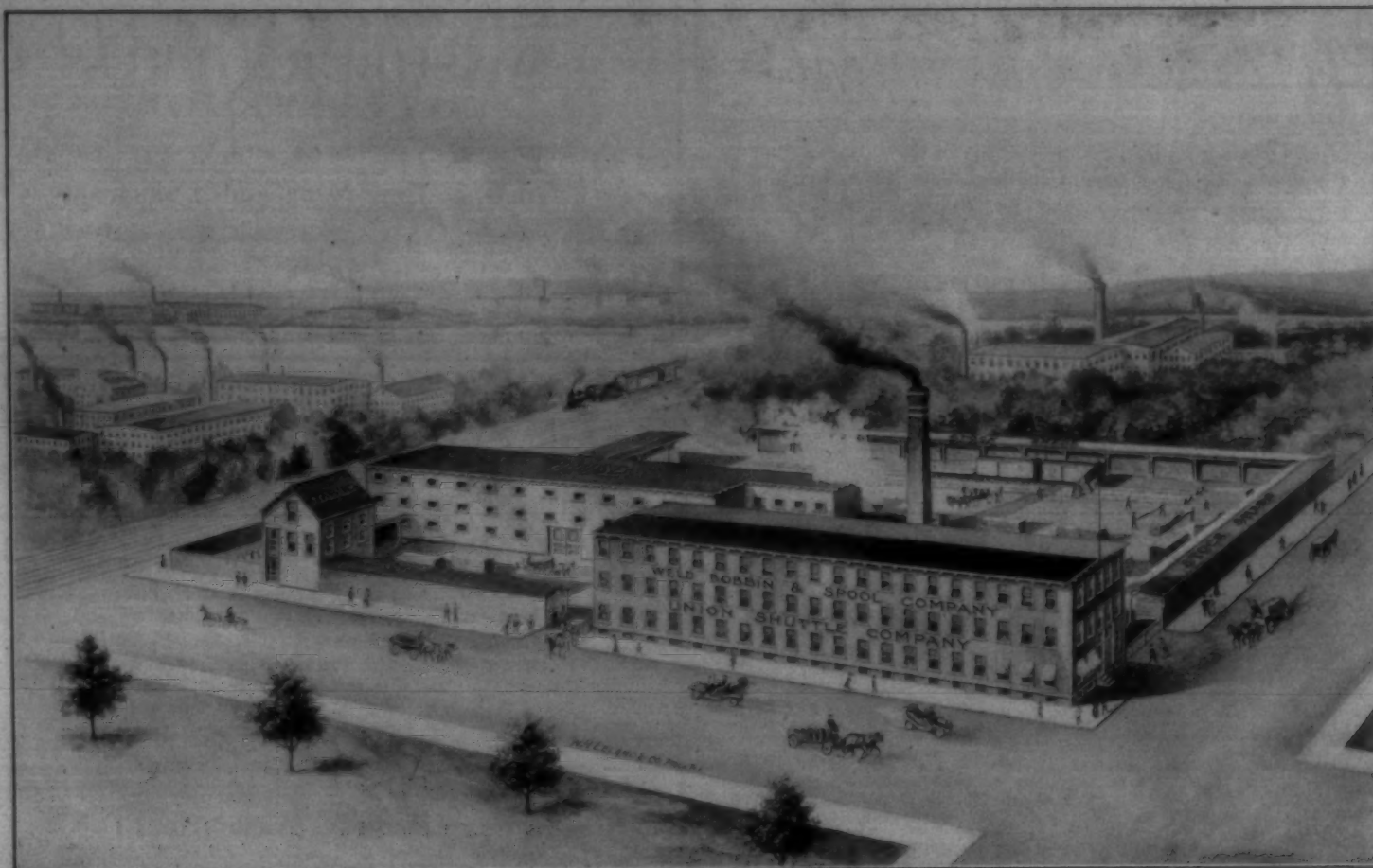
An Irishman wanted an empty bottle in which to mix a solution, and went to a druggist's to buy one. Selecting one that answered his purpose, he asked how much it was.

"Well," said the clerk, "if you want the empty bottle it'll be one cent, but if you have anything put in it we don't charge anything for it."

"Shure, that's fair enough," observed the Irishman; "put in a cork." —Exchange.

He—Do you believe a woman should get a man's wages?

She—If I ever married a man I'd get his wages if I had to choke him." —Exchange.



UNION SHUTTLE CO., LAWRENCE, MASS.

High Grade Shuttles.

A great deal of attention has been lately attracted both in the United States and in England to the self threading shuttle, and some seem to think that it is a new thing.

For 25 years the Union Shuttle Co., of Lawrence has been making a practical hand-threading shuttle. A quarter of a century ago there was much less interest shown in such an article, but the Union Shuttle Co., kept right on making them, knowing that the time would surely come when the necessity for

shuttles show the device firmly in place. It is said that it is easier for weavers to run ten looms with these threaders than six of the suction description. There are over 30,000 of the shuttles now in use and they have been adopted by some of the largest and best mills, not only in New England, but through the South. Another improvement is the Hand Threader No. 2. This is a new device, but one that is making itself many friends. The mechanism is simple, combining the advantages of the Hand Threader with its own. The improvement

facturers are invited to give the shuttles a trial, with almost a certainty that an order will follow. At the present time the factory is rushed with orders, a fact that is surely a good indication of the success of the product.

COTTON GOODS IN BOLIVIA

Continued from page 9

Bolivia fifteen years after the commencement of train service.

The distance from Arica to La Paz is not only shorter by this route than by any other, but the conditions of the bay at Arica are also much more favorable for the handling of merchandise. Lightering is rarely stopped by the violence of the sea, as is frequently the case at Antofagasta and Mollendo, two of the stormiest ports on the Pacific.

Argentine Railway Route.

Goods imported by the Argentine railway route enter Bolivia through either Tupiza or Tarija. Those passing through Tarija are mainly for that Province, a few going north to Santa Cruz, while some of those passing through Tupiza go north to Potosi and Sucre. Foreign goods for this route are landed at either Buenos Aires or Rosario (Bolivia now has a customs agency in Rosario), and are sent by one of three railways to Tucuman, and thence by the Argentine Central Northern Railway to the border town of La Quiaca via Jujuy. From Buenos Aires to Rosario by rail is 189 miles, Rosario to Tucuman 528 miles, Tucuman to Perico 207 miles, Perico to Jujuy 11 miles, and Jujuy to La Quiaca 179 miles, a total of 1,114 miles. From La Quiaca goods are

carried by cart or animal back 57 miles north to the Bolivian customs station at Tupiza, or else 82 miles northeast to Tarija. An increasing portion of these shipments are now reaching Tarija by another route. At Perico, on the railroad just south of Jujuy, the line branches off and runs 51 miles to Ledesma, and from this point pack trains go 237 miles to the Bolivian border town of Yacuiba. Yacuiba has been a substation to the Tarija customs station, but its business is now larger than that of Tarija, so it has now been created an independent station.

The Argentine Central Northern Railway has a concession for extending its line from La Quiaca to Tupiza, a distance of 57 miles, and the Bolivian Government had agreed in case this was done to build a line from Tupiza to Potosi. When the Argentine line was building between Jujuy and La Quiaca, Bolivian commerce, in anticipation of the early extension of the road to Tupiza, began to turn its attention to this route so as to escape the high charges at Antofagasta, and imports by this route increased rapidly. In 1909, however, the decision of the Argentine Government to postpone the extension, combined with other conditions, caused this trade to fall off. According to Argentine figures, the imports into Bolivia via the Argentine railway have been as follows: Average for five years, 1896-1900, \$258,630; average for five years, 1901-1905, \$331,234; 1906, \$399,162; 1907, \$936,818; 1908, \$1,275,477; 1909, \$847,258.

Continued next week



FIG. 2



FIG. 4

such a device would be recognized. The time is here, and the company has not only been making the shuttles continuously, but it has been working and perfecting them, until it is now ready to stand upon its own merits entirely.

The accompanying cuts show the right and left-hand shuttles. They are fitted with patent self-threaders and it is impossible for the shuttle to become unthreaded. The thread slips easily and quickly through the thread slot and stays there. There is nothing to work loose, and even old and worn shut-

has been patented by the company, and many large orders have been received.

A close inspection of the cuts will show some of the advantages. The position of the eye in Fig. 2. For example, obviates trouble in threading. In Fig. 4 the eye is so placed that it is impossible for the thread to knot or break, an estimable advantage in itself. Fig. 4 can also be fitted with a porcelain eye for woolen and worsted weaving. There is practically no trouble common to shuttles that has not been provided for by the makers. Manu-

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If you are needing men for any position or operatives or have second hand machinery, etc., to sell, the want columns of the **Southern Textile Bulletin** afford a good medium for advertising the fact.

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We are in closer touch with the mills than any other publication and can do more toward placing men in good positions. We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau.

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Want three families of spinners, doffers and spoolers and one oiler and bander for spinning. Pay 14 cents for spinning, 75 cents for doffers, \$1.10 for oiler and bander for 40 frames. Also one oiler for card room, pay \$1.00 per day. New Mill. Houses have electric lights. Apply or write W. F. Campbell, Lexington, N. C.

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A certain man living in a New England village lost a horse one day, and, failing to find him, went down to the public square and offered a reward of five dollars to any one who could bring him back.

A half-witted fellow who heard the offer volunteered to discover the whereabouts of the horse, and, sure enough, he returned in half an hour leading the animal by the bridle.

The owner was surprised at the case with which his half-witted friend had found the beast, and, on passing the five dollars to him, he asked:

"Tell me, how did you find him?"
To which the other made answer:
"Wal, I thought to myself where I would go if I was a hoss; and I went there, and he had."—Exchange.

Married Men's Troubles.

It was married men's night at the revival meeting.

"Let all you husbands who have troubles on your minds stand up," shouted the preacher at the height of his spasm.

Instantly every man in the church arose except one.

"Ah!" exclaimed the preacher, peering out at this lone individual, who occupied a chair near the door. "You are one in a million."

"It ain't that," piped back this one helplessly as the rest of the congregation gazed suspiciously at him: "I can't get up—I'm paralyzed."—Exchange.

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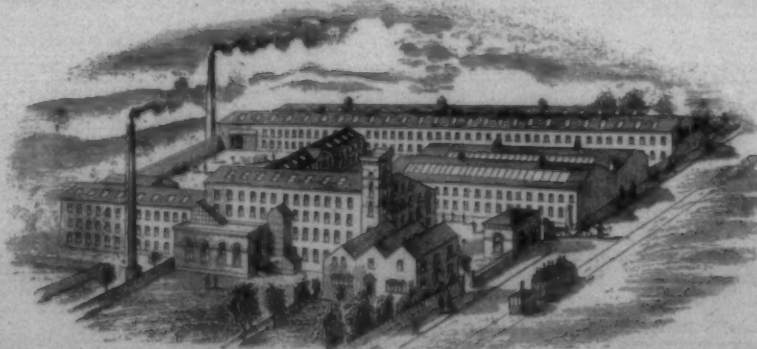
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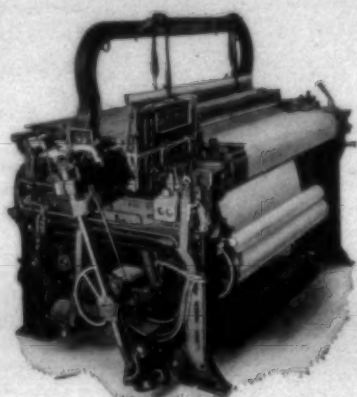
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